

ARLINGTON PUBLIC SCHOOLS

In accordance with the provisions of the Massachusetts General laws, Chapter 30A, Section 20, notice is hereby given for the following meeting of the:

***Arlington School Committee
Standing Subcommittee: Facilities
Tuesday, February 25, 2025
5:00 PM***

*In person:
Arlington Public Schools District Office
14 Mill Brook Drive
2nd Floor, Superintendent's Office
Arlington, MA 02476*

*Via Zoom:
<https://us02web.zoom.us/j/88327221902?pwd=6KUwuM6Z2E47bKQHi6LCd12sPs7Cdc.1>*

Open Meeting (J. Thielman)

Approve Jan. 8, 2025, meeting minutes

Tech and Space Plan update (Matt Coleman, Dan Anderson)

- *APS Facilities and Tech Plan Working Doc 2025-02-24*
- *Plan Update*

School Capital Projects – any updates from our last meeting?

Ottoson SOI planning – next steps

- *Copy of OMS - Capital Needs Assessment CNA Report*
- *AHS.SOI.Draft1.3.4.14*
- *Draft SOI 1.7.2025*

Adjournment (J. Thielman)

The listings of matters are those reasonably anticipated by the Chair, which may be discussed at the meeting. Not all items listed may in fact be discussed and other items not listed may also be brought up for discussion to the extent permitted by law.

Stated times and time amounts, listed in parenthesis, are the estimated amount of time for that particular agenda item. Actual times may be shorter or longer depending on the time needed to fully explore the topic.

Submitted by Jeff Thielman

Massachusetts law requires all open session meetings of public bodies to be accessible to members of the public, including those with disabilities. If you need reasonable accommodations in order to participate in the meeting, contact the Administrative Assistant to the Arlington School Committee Liz Diggins at ediggins@arlington.k12.ma.us.



Town of Arlington, Massachusetts

Meeting Location - Hybrid

Summary:

In person:

Arlington Public Schools District Office

14 Mill Brook Drive

2nd Floor, Superintendent's Office

Arlington, MA 02476

Via Zoom:

<https://us02web.zoom.us/j/88327221902?pwd=6KUwM6Z2E47bKQHi6LCd12sPs7Cdc.1>



Town of Arlington, Massachusetts

Open Meeting (J. Thielman)



Town of Arlington, Massachusetts

Approve Jan. 8, 2025, meeting minutes



Town of Arlington, Massachusetts

Tech and Space Plan update (Matt Coleman, Dan Anderson)

Summary:

- APS Facilities and Tech Plan Working Doc 2025-02-24
- Plan Update

ATTACHMENTS:

Type	File Name	Description
▢ Report	APS_Facilities_and_Tech_Plan_Working_Doc_2025-02-24.pdf	APS Facilities and Tech Plan Working Doc 2025-02-24
▢ Presentation	Facilities_Subcommittee_Meeting_-_Plan_Update.pdf	Facilities Subcommittee Meeting - Plan Update

APS Facilities and Tech Plan Outline

[cover page]

Letter from the Superintendent

Arlington Community Members,

I am excited to present here an action-oriented facilities and technology plan for our district. It is intended to be a roadmap that details how we can *both* achieve our aspirations as a district for both facilities and technology resources *and* to project out costs so that we can plan, pace out expenses, and take a multi-year approach to capital and operational budgets. In consultation with the School Committee, I have asked our team to project out an effective aspirational vision that we would work to enable in coming budgets, while also balancing realistic expectations for what can be done financially.

This report is a product of a broad working group this year on Inclusive Spaces and Technology, and builds on the work of the Five-Year Strategic Plan for Year-year and on the work of last year's working group on Inclusive Spaces. I enthusiastically thank all of the Arlington students, parents, staff, and partners who have taken part in each of these efforts that have built upon each other.

I am eager for us to delve into these plans as a community and look forward to our dialogue.

Dr. Elizabeth Homan,
Superintendent

Executive Summary

The purpose of the plan is to serve as a comprehensive communication tool for both internal stakeholders and the broader community. It draws from our Five-Year Strategic Plan, our vision for inclusive spaces, and the developing vision of Deeper Learning for all students to unify the facilities plan and the technology plan. The plan outlines key priorities, operational details, and a strategic roadmap to ensure APS students and staff have the necessary conditions and resources for success.

The plan is intended concisely to outline our anticipated needs in facilities and technology to be able to provide crucial elements of Deeper Learning: Mastery, Identity, Creativity. Similarly, the plan's recommendations account for the spaces and technology required to meet APS's overall vision. Over the next five years, it aims to address anticipated needs in critical areas, including environmental sustainability in facilities, furniture and equipment refresh cycles, temperature control and HVAC improvements, and enhanced accessibility. A central focus is enabling teachers to create flexible and inclusive learning environments that support diverse student needs. Each of these areas is represented in the subsequent sections of the plan.

Following the facilities and technology details, the plan provides fiscal projections that both show currently budgeted resources and which estimates what would be needed to implement the plan fully. With this blueprint, we can plan elements of the capital budget.

Contents

[Note: TOC to be reformatted in final product]

[\[cover page\]](#)

[Letter from the Superintendent](#)

[Executive Summary](#)

[Contents](#)

[Vision for the APS Learning Environment](#)

[APS Facilities Priorities](#)

[Comprehensive Improvement: Fully Renovating Ottoson Middle School](#)

[Context](#)

[Priorities](#)

[Additional Notes](#)

[Environmental Sustainability and Climate Control: Future-Proofing our Facilities](#)

[Context](#)

[Priorities](#)

[Additional Notes](#)

[Access and Inclusion: Ensuring All Are Welcome](#)

[Context](#)

[Priorities](#)

[Additional Notes](#)

[Furniture , Fixtures, and Finite Projects: Efficiently Nailing the Fundamentals](#)

[Context](#)

[Priorities](#)

[Additional Notes](#)

[APS Technology Priorities](#)

[Single-Location Technology: Bringing the Rooms Together](#)

[Context](#)

[Priorities](#)

[Additional Notes](#)

[Individually-Assigned: Tools for Teachers, Stuff for Students](#)

[Context](#)

[Priorities](#)

[Additional Notes](#)

[Budgets and Implementation: Making it Happen](#)

[Fiscal Projections](#)

[Contributor Acknowledgements](#)

[Appendices](#)

Vision for the APS Learning Environment

"APS Vision: The vision of the Arlington Public Schools is to be an equitable educational community where all learners feel a sense of belonging, experience growth and joy, and are empowered to shape their own futures and contribute to a better world."

With this overarching vision in mind for APS, the working group has focused on confirming the crucial facilities and technology conditions and resources that enable the vision. While any work on these areas must fundamentally contribute to our ability to provide opportunities for interdisciplinary, project-based, authentic learning experiences, and to encourage the senses of belonging and empowerment at the center of the vision, there are specific, concrete physical features and resources that are foundational to meeting these lofty ideas.

With that in mind, our approach is to aim for all Arlington learners to learn in inclusive, modern facilities with effective spaces, technology with efficient operations. Through audits of our existing spaces and recommendations for future renovations and improvements to technology, furniture and fixtures, and other infrastructure, the ultimate outcome of school climate measures and student and family experiences in our facilities will be improved.

All learners should have safe accessible access to all facilities within their learning environment. This includes the condition of facilities which includes heating, functionality, elevator access, mold free facilities, etc. All learners should be equipped with devices that are adaptable to their specific needs (voice recognition, interpretation, etc.). And any school practices we expect to see must have space.

All learners should experience learning environments that are comfortable and inspiring. Arlington Public Schools is a shared and student centered learning environment that requires equitable access to an efficient learning space. Learning spaces should allow for appropriate lighting, access to curriculum by way of visual representation such as projection, whiteboards, etc. Learners should experience a sense of belonging supported by representation of cultures, access to break areas, visual representation of student art/work, accurate and updated universal signage throughout the building.

APS Facilities Priorities

Our Goal is to create spaces where our students and staff can learn and teach effectively and sustainably. To do that, the measures planned here bring together needs for modernization along with improvement, maintenance, and regular ongoing costs that we can anticipate. Some facilities work comes in the form of large-scale capital projects, and other work is regular maintenance.

Recently, the Town of Arlington has undertaken longer-term visioning for *Arlington's Net Zero Action Plan*, which provides an aspirational backdrop for many efforts, as does the concluding Arlington High School building project, which delivers on much of the *Net Zero Action Plan's* blueprint. Building on past work, much of what comes next will need to stem from location-specific next steps that apply these visions.

A focused portfolio of complementary projects are outlined below. Some cut across most or all school buildings, while others are needed particularly in one or another. For each, we share initial ideas about prioritization here. Note that many of the smaller-scale projects omit the Ottoson Middle School, for which the district looks to propose a statement of intent to apply for the Massachusetts School Building Authority's school building program for a large-scale capital project. Such a project would be comprehensive and would address many of these underlying issues at once.



Comprehensive Improvement: Fully Renovating Ottoson Middle School

Context

APS intends to pursue a Massachusetts School Building Authority (MSBA) project to fully renovate the Ottoson Middle School. Such a project would be a multi-year endeavor. This is the same program that APS used to support the new Arlington High School project.

The MSBA process begins with districts submitting a Statement of Intent (SOI) to apply for the core state aid program. This process, which might necessitate the hiring of a vendor, will happen in the coming year. After this, if APS is invited to complete a full application, the multi-year planning, budgeting, and building process could begin.

Priorities

The following specific priorities are reflected in the projected budget for the next five years.

What are the specific items needed?	What is the ideal timeline? (or frequency of refresh or revisiting)	What are the cost drivers and considerations?	What is the projected cost?
Engage a vendor to	If applicable, during	Cost of vendor to	TBD

support the SOI	2025-2026.	support, if APS moves forward with one	
OMS Building Project	Multi-year timeline beginning with SOI.	Cost of full renovation TBD	

Additional Notes

- NA

Environmental Sustainability and Climate Control: Future-Proofing our Facilities

Context

Arlington's Net Zero Action Plan [provides the core aspirations](#) for a future of electrification and environmental sustainability, by addressing the infrastructure of buildings, transportation, and energy supply effects. These components coalesce into a vision for the town's infrastructure to achieve net zero emissions by 2050.

Actions for our schools from the Net Zero plan include:

- Existing school buildings will undergo deep energy retrofits to minimize energy consumption and transition school facilities from fossil fuels to electric alternatives.
- The plan encourages the development of local renewable energy sources, such as rooftop solar on school buildings, to reduce reliance on fossil fuels broadly.

These initiatives will have particular implications for temperature control, which also has a profound impact on student learning as comfortable conditions contribute to learning. For that reason, cooling in core school areas and classrooms is a central goal. This is, however, costly, especially when done in a fully green/electrified model.

Cooling first would address core/common areas of schools, then classrooms and other areas. A possible first step in some cases would be to study the project needs for electrification in a given building. One recent proposal that APS has received came in at about \$800,000. However, this likely will not be needed for each building. A

Priorities

The following specific priorities are reflected in the projected budget for the next five years.

What are the specific items needed?	What is the ideal timeline? (or frequency of refresh or revisiting)	What are the cost drivers and considerations?	What is the projected cost?
Cooling for core areas of every school building	Plan for upcoming years, in prioritized order: -Group 1: Thompson, Bishop -Group 2: Hardy, Stratton	Considerations - Whether a study is needed - Whether cooling is standard or green/electric - Whether full	Overall, significant project with several variables from the considerations.

	-Group 3: Others	buildings are cooled, or selected areas/floors	
Cooling for all schools	Plan for upcoming years, in prioritized order: -Group 1: Thompson classrooms -Group 2: Bishop classrooms -Group 3: Other	- Whether it is possible to use mounted units in current infrastructure	

Additional Notes

- As these projects develop, there is an opportunity for the town to increasingly make use of reused materials.
- An additional facilities component contributing to sustainability will be efforts to reduce school waste, improve recycling, and address the sustainability of cafeteria materials. These elements do not currently project any major capital expenditures.

Access and Inclusion: Ensuring All Are Welcome

Context

APS is fully committed to ensuring complete accessibility to our schools. The district conducted an Americans with Disabilities Act (ADA) audit at Hardy in 2019, which noted specific areas for focus and improvement. Other buildings will require similar assessment. As these assessments are completed, we will know the specific areas that need improvement and we will address the issues identified.

An additional crucial component of accessibility in the context of schools is the need for learning environments that are inclusive in the sense of enabling not just physical access, but configuration in ways that makes it easy for all learners to use. This often comes in the form of establishing classrooms that make it easy for teachers to set up flexible learning environments. This will be addressed in more detail in the following section.

Audio projection technology is an additional element of inclusive access, ensuring that all students with hearing needs are able to fully participate in learning. This will be addressed further in the technology discussion later in this document.

Priorities

The following specific priorities are reflected in the projected budget for the next five years.

What are the specific items needed?	What is the ideal timeline? (or frequency of refresh or revisiting)	What are the cost drivers and considerations?	What is the projected cost?
-------------------------------------	---	---	-----------------------------

Engage a vendor to do ADA reviews of schools	For the 2025-2026 School Year, beginning with priority schools serving students with specific needs, with other schools to follow in subsequent years.	Consideration: Availability of vendors/cost.	The audit at Hardy
Conduct ongoing improvements to address items in the ADA audits or identified elsewhere	These would be addressed annually, in projects assessed within the capital budget.	Various accessibility projects, such as ramps.	Variable

Additional Notes

- NA currently

Furniture , Fixtures, and Finite Projects: Efficiently Nailing the Fundamentals

Context

Our schools are vast ecosystems of activity and many potential improvements are smaller in scale. This includes the retrofitting of classrooms with updated and modernized equipment. As discussed under the “Access and Inclusion” section above, classrooms with flexible furniture configurations greatly assist learning.

At the same time, furniture needs to be replaced over time. Our aim is to plan both maintenance/replacement and modernization/improvement together as one process. We can anticipate that a certain amount of furniture will need to be replaced with regularity, so if we plan to update as we replace, and plan to replace over time at a consistent pace, we can bring some predictability and normalcy to facilities expenses while also improving learning conditions.

We have blueprints for thinking about improving our classes over time, thanks to the recent high school project and to recent ongoing work at Dallin, where classrooms have been updated over time.

As mentioned above, the district seeks to pursue a large-scale Massachusetts School Building Authority (MSBA) project to conduct a full renovation of the Ottoson Middle School. Because this would likely supersede these more limited projects, Ottoson is provisioned here.

Priorities

The following specific priorities are reflected in the projected budget for the next five years.

What are the specific	What is the ideal	What are the cost	What is the projected
-----------------------	-------------------	-------------------	-----------------------

items needed?	timeline? (or frequency of refresh or revisiting)	drivers and considerations?	cost?
Classroom updates	APS would look to confirm the number of classrooms to be addressed, and then spread that need out over five years.	Chairs, desks, files, pedestals, chairs, tables, etc.	Projected cost/room is a minimum of \$14,000, based on recent experience in the AHS project and other recent updates. Inflation will also apply.

Additional Notes

- NA

APS Technology Priorities

At APS, we seek to empower students and teachers to use technology to support learning and problem-solving in a safe and responsible manner. Technology enables student learning in myriad ways, and our teachers are increasingly fluent in various tools.



We aim for students to be able to use tech to explore and create their own work. In order to get there, the conditions must be in place so that teachers are able to use tech to support learning and instruction, while being able to collect data to inform teaching.

In short, all students and staff must have access to the tools they require for teaching and learning.

Single-Location Technology: Bringing the Rooms Together

Context

Current state: The district needs a holistic program that equips classrooms with the appropriate tools for teaching and learning, most notably digital tools, projection and increased accessibility. This would also include AV for cafeterias, gyms and other large meeting spaces for remote participation and outreach.

Currently OMS has the greatest need for upgrades in the classroom, followed by Dallin, Gibbs and Thompson.



In addition, there are A/V systems in large common spaces in the schools which require updates. These spaces might include learning centers, supplemental classrooms, student labs, and living classrooms.



Priorities

The following specific priorities are reflected in the projected budget for the next five years.

What are the specific items needed?	What is the ideal timeline? (or frequency of refresh or revisiting)	What are the cost drivers and considerations?	What is the projected cost?
Classroom updates	Paced out over five years	TBA # of classrooms	TBD
Shared space updates	These will be	Cost of projectors,	TBD

	prioritized across five years, with 2-3 projects annually	speakers, amplifiers, etc	
--	---	---------------------------	--

Additional Notes

- NA

Individually-Assigned: Tools for Teachers, Stuff for Students

Context

Teachers and students rely on crucial technology tools to enable their learning activities. All of the technology that we use – primarily student chromebooks and teacher laptop computers – needs to be updated periodically. Currently, APS does not have funding approved to complete hardware refreshes over the next 5 years, based on inventory. This includes both student and teacher devices.

Teachers currently use MacBook Air models, managed by APS. These computers are expected to have a 6-year average lifespan, at which point they must be replaced.

In addition, Paraprofessionals are not allocated devices and no funding has yet been approved to expand provisioning to other educators. However, this expansion would greatly enhance the collaboration between educators and support for students, and so is proposed here. This would begin with 200 devices for paraprofessionals during 2025-2026.

Placeholder for Graphic

APS has followed through on its commitment to providing students with the devices that they need to fully participate in learning activities. Students currently used APS managed Chromebooks, which are expected to be replaced every 3 years.

In 2025, the district projects the lifespan of a student chromebook to be three years, while the life of a teacher laptop to be six years.

Placeholder for Graphic

IT is working with the principals of Gibbs, OMS and AHS to redefine the device distribution policy for FY2526 and the goal is to move to 1:1 for K-8, but there is not yet budget to support this.

Placeholder for Graphic

Priorities

The following specific priorities are reflected in the projected budget for the next five years.

What are the specific items needed?	What is the ideal timeline? (or frequency of refresh or revisiting)	What are the cost drivers and considerations?	What is the projected cost?
APS Teacher MacBooks		MacBook Air / teacher, every 6 years	TBD
Devices for Paraprofessionals	TBA	TBA	TBD
Student Chromebooks	TBA	Chromebook lifespan of 3 years, with increasing participation	TBD

Additional Notes

- NA

Contributor Acknowledgements

Arlington Public Schools thanks the following individuals who have worked on the Inclusive Spaces and Technology Working Group during this 2024-2025 school year, producing this document.

Matt Coleman
Fran Gorski
Dan Anderson
Alison Elmer
Kim Visco
Jing Huey Wei
Patricia Sheppard
Edelawit Carswell
Sindhu Revuluri

This work built on the Five-Year Strategic Plan [\[LINK\]](#) committee and on the work of the 2023-2024 working group on Inclusive Spaces, which included the following contributors.

Sindhumathi Revuluri
Amanda Donohue
Jing-Huey Wei
Theo Strauss
Kristin Burke
Amy Forsythe
Tricia White
Kim Visco

Facilities Subcommittee Update

Prepared by Dan Anderson
and Matt Coleman
2025-02-25



Arlington Public Schools
Education That Empowers

Project Goal



Arlington Public Schools
Education That Empowers

The purpose of the plan is to serve as a **comprehensive communication tool** for both internal stakeholders and the broader community. It draws from our Five-Year Strategic Plan, our vision for inclusive spaces, and the developing vision of Deeper Learning for all students to unify the facilities plan and the technology plan. The plan **outlines key priorities, operational details, and a strategic roadmap to ensure APS students and staff have the necessary conditions and resources for success.** Over the next five years, it aims to address anticipated needs in critical areas, including environmental sustainability in facilities, furniture and equipment refresh cycles, temperature control and HVAC improvements, and enhanced accessibility. **A central focus is enabling teachers to create flexible and inclusive learning environments that support diverse student needs.**

Updated Timeline



Arlington Public Schools
Education That Empowers

- January-February: Continue developing section details
- February: Complete full narrative draft and identify outstanding questions that must be resolved to complete plan and budget details
- February-March: Identify stakeholder groups and gather feedback on draft
- March-April: Cycles of revision
- March-April: Continuously develop actual and projected budgets

APS Facilities Priorities



Arlington Public Schools
Education That Empowers

Renovating OMS (*New*)



- SOI costs?
- Long-term project

Environmental Sustainability and Climate Control (*Combined*)



- Cooling in Core Areas
- Cooling in Classrooms

Access and Inclusion



- ADA audits
- Facilities updates

Furniture and Fixtures



- Classroom Furniture (updates and regular replacements)

APS Technology Priorities



Arlington Public Schools
Education That Empowers

Individual



- Teacher Laptops
- Student Chromebooks
- Other staff tech

Classroom- & Place-Based



- Classroom Projectors
- Gym or Cafetorium AV



Arlington Public Schools
Education That Empowers

Questions and Feedback



Arlington Public Schools
Education That Empowers

References

Team Members



Arlington Public Schools
Education That Empowers

Liz Homan - Superintendent

Matt Coleman - Director of Data, Research, and accountability

Fran Gorski - Finance and Operations

Patricia Sheppard - CIO (Town and School)

Dan Sheehan - School Facing Tech Lead

Alison Elmer - Asst. Super of Student Services

Kim Visco - APS Wellness Director

Jing-Huey Wei - Performing Arts Director

Sindhu Revuluri - Community Member

Lettie Carswell - Arlington High School Junior



Arlington Public Schools
Education That Empowers

Old/Delete?

Setting the Stage - Vision Statement



Arlington Public Schools
Education That Empowers

The vision of the Arlington Public Schools is to be an equitable educational community where all learners feel a sense of **belonging**, experience **growth and joy**, and are **empowered** to shape their own futures and contribute to a better world.

Setting the Stage - Strategic Plan



Arlington Public Schools
Education That Empowers

The Arlington Public Schools will maintain a system of schools that is **safe, well-maintained, sustainable, and fiscally responsible, with the appropriate tools and resources to support best educational practices and an optimum teaching and learning environment.**

Report Sections



Arlington Public Schools
Education That Empowers

Instructional Vision

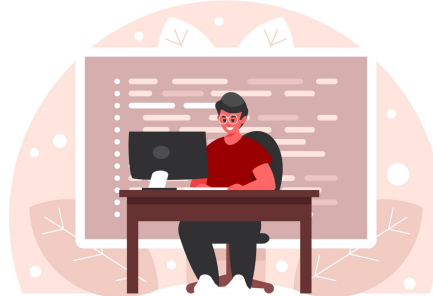
Our vision is to aim for all Arlington learners to learn in inclusive, modern facilities with effective spaces, technology with efficient operations.

Technology

Our Goal is to empower students and teachers to use technology to support learning and problem-solving in a safe and responsible manner.

Facilities

Our Goal is to create spaces where our students and staff can learn and teach efficiently and effectively.



We aim to cover several topics



Arlington Public Schools
Education That Empowers

For these topics, as appropriate, we'll explore:

- What needs do we anticipate over ~ 5 years?
- What would it take to meet those needs?
- How can we set up a regular refresh cycle for anticipated cyclical costs (eg: classroom furniture), in order to even out annual expenses?

Technology

Individual-Level Tech

Classroom and
Place-Based Tech

Facilities

Environmental
Sustainability

Furniture

Climate Control/HVAC

Inclusive Accessibility

Questions for the Committee



Arlington Public Schools
Education That Empowers

- As we seek to anticipate these needs and possible solutions, what context would be helpful to provide?
- What can we do to make this plan/report as useful as possible, as a public-facing communication?
- What questions about our facilities and technology in particular does this bring to mind for you, which you might hope that we would address?
- What other feedback do you have to guide this work?



Town of Arlington, Massachusetts

School Capital Projects – any updates from our last meeting?



Town of Arlington, Massachusetts

Ottoson SOI planning – next steps

Summary:

- Copy of OMS - Capital Needs Assessment CNA Report
- AHS.SOI.Draft1.3.4.14
- Draft SOI 1.7.2025

ATTACHMENTS:

Type	File Name	Description
▢ Presentation	Copy_of_OMS_-_Capital_Needs_Assessment_CNA_Report.pdf	Copy of OMS - Capital Needs Assessment CNA Report
▢ Presentation	AHS.SOI.Draft1.3.4.14.pdf	AHS.SOI.Draft1.3.4.14
▢ Presentation	Draft_SOI_1.7.2025.pdf	Draft SOI 1.7.2025

Capital Needs Assessment

PRELIMINARY REPORT

Prepared for:



**ARLINGTON
MASSACHUSETTS**

869 Massachusetts Avenue
Arlington, MA 02476

Ottoson Middle School

Arlington, MA

April 29, 2022



Ottoson Middle School: Property Overview

Total Buildings: 1

<u>Building Type</u>	<u># of Buildings</u>	<u>Approx. GSF</u>
Elevator	1	170,114
Walk-up	-	-
Totals:	1	170,114

Occupancy: Public Middle School

Property/Development Age: 25

Year of Construction: 1921

Most Recent Rehab: 1997

City & State: Arlington, MA

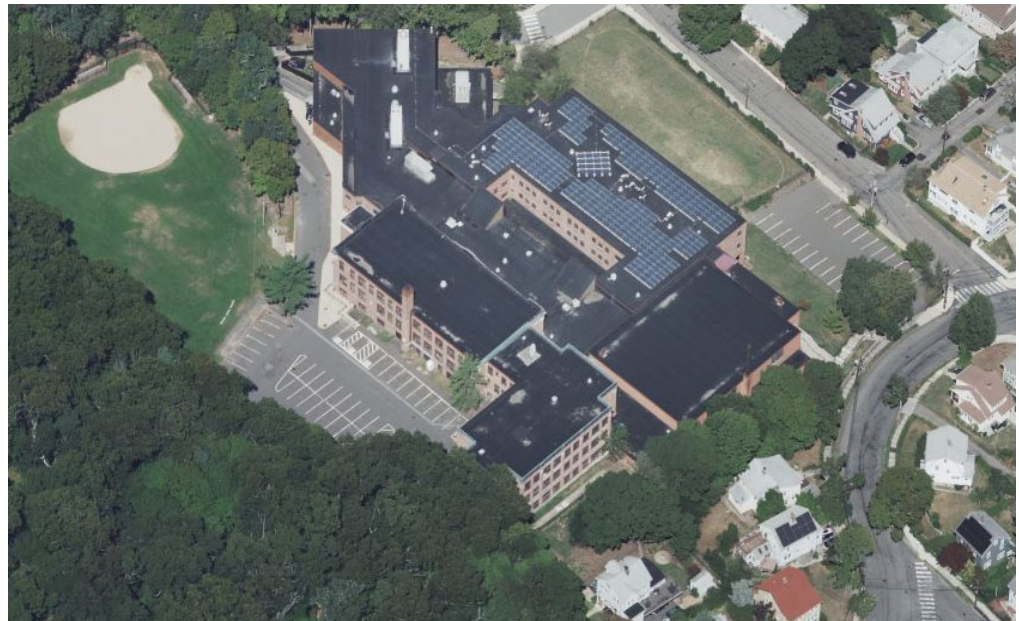
Addresses: 63 Acton Street

OSI Project Number: 22032

Assessment Date: April 19th, 2022

Assessment Conditions: High 40's, Sunny

Assessor: Matthew Chown



Property Description:

Ottoson Middle School is a public middle school located in a predominantly residential neighborhood of Arlington, MA. The school serves students in grades seven and eight. The facility was originally constructed circa 1921 and underwent a major rehabilitation (including reported addition) circa 1997. The facility contains two gymnasiums (herein referred to as blue and wood gym), a library and media center, an array of classrooms and staff/administrative space, several common restrooms, hallways, and stairways.

Ottoson Middle School

Arlington, MA

Ottoson Middle School is a public middle school located in a predominantly residential neighborhood of Arlington, MA. The school serves students in grades seven and eight. The facility was originally constructed circa 1921 and underwent a major rehabilitation (including reported addition) circa 1997. The facility contains two gymnasiums (herein referred to as blue and wood gym), a library and media center, an array of classrooms and staff/administrative space, several common restrooms, hallways, and stairways. Overall, the development is in fair to good condition. The interior spaces and various building systems are adequately appointed and maintained. That said, the property has substantive capital needs anticipated in the coming years; a number of systems and components are at or approaching the end of their useful lives. Anticipated near-term needs include asphalt pavement resurfacing, localized concrete flatwork repairs/replacement, localized retaining wall repairs, as-needed stormwater drainage improvements, upgrade/replacement of the building's HVAC pneumatic control system (i.e., conversion to a direct digital control system), older rooftop-mounted HVAC equipment replacement, brick and stone masonry cladding repairs/replacement, deteriorated exterior caulking replacement, EPDM roof assembly replacement, and interior renovation efforts (e.g., repainting, floor covering replacement, displaced ceiling tile replacement, as-needed bathroom fixture and accessory replacement, etc.).

Future capital actions are based on useful life expectations and assume continued effective maintenance and physical management. Costs for the twenty-year plan total \$12,929,830, or \$76.01 per gross square feet in current dollars (\$16,243,016, or \$95.48 per gross square feet in inflated dollars).

Site Systems

The facility is located on a moderately sloped parcel with a pair of asphalt-paved parking lots (one at rear and northeast corner of development). For the purposes of this report, the front of the building is considered to be facing north. A recreational park is located towards the southwest corner of the facility and is reportedly the responsibility of the Town of Arlington, MA.

Concrete walkways and site steps facilitate pedestrian access throughout the site. A mix of stone and concrete block masonry retaining walls are present at steep elevation changes. Metal chain-link fencing is present along the perimeter of the north end recreational field as well as along portions of the east property limit. Pole-mounted light-emitting diode (LED) fixtures facilitate illumination along the roadways and parking areas. Additional site elements include landscaping comprised of lawn areas, trees, shrubs, and plantings, wood entry signage, as well as site distribution systems.

- 1. Costs for the development's site related elements total \$899,219 or \$5.29 per gross square feet in inflated dollars.**
2. The asphalt pavement appears to date to the 1997 rehabilitation. Deterioration in the form of cracking, depressions, and evidence of fatigue was observed within the asphalt. Costs to scarify and resurface the asphalt pavement are shown in Year 1. Future costs to carry out preventative maintenance repairs in the form of crack filling, sealcoating, and restriping are shown every five years starting in Year 6.
3. The concrete walkways, site steps, and landings vary in condition. Management reports concrete step replacement was carried out in recent years. Localized cracking and concrete spalls were observed within the steps, landings, and walkways. Periodic costs to carry out sectional concrete repairs/replacement (including as-needed refurbishment of metal railings/guardrails) are shown every eight years starting in Year 1.
4. Several displaced concrete block masonry units were observed within the front elevation retaining walls. Furthermore, localized mortar loss/deterioration was noted within the development's perimeter stone retaining walls. Periodic costs to carry out as-needed retaining wall repairs/replacement are shown every five years starting in Year 1. These costs also include pressure washing of the segmental block retaining walls present at the front of the development.
5. The development's metal chain-link fencing is in serviceable condition at the present time. Periodic costs to carry out sectional repairs/replacement are shown every five years starting in Year 2.
6. A dumpster enclosure comprised of metal chain-link fencing is located at the south end of the building (i.e., abutting food receiving area). Future replacement of the dumpster enclosure is shown in Years 5 and 20.
7. No problems/concerns were reported with regards to the pole-mounted LED fixtures. Future replacement of the LED fixtures is shown in Years 5 and 20, based on a fifteen-year expected useful service life.
8. Periodic costs to carry out as-needed landscaping repairs/upgrades including tree pruning efforts are shown every five years starting in Year 1.
9. Future replacement of the development's wood entry signage is shown in Year 5.
10. Based on discussions with management, the development is experiencing stormwater drainage issues at the present time. The full extent of these issues is unconfirmed. A place marker allowance to carry out as-needed repairs/improvements are shown in Year 1, pending a detailed review by a qualified design professional.

Mechanical Room

The building's central mechanical room houses the heating generation equipment. A pair of Lochinvar natural gas-fired condensing boilers (800 MBH energy input each) facilitate hydronic heat generation for the building. A Smith cast-iron sectional boiler facilitates supplemental heating for the facility. Augmenting the boilers are Grundfos micro-VFD boiler water circulation pumps, a pair of base-mounted hydronic heat circulation pumps, as well as variable frequency drives governing hydronic heat circulation pump performance. Domestic hot water (DHW) generation for the building is facilitated via a Navien condensing boiler (150 MBH energy input) working in concert with an HTP indirect-fired domestic hot water (DHW) storage tank (80-gallon storage capacity). Augmenting this system are a pair of Grundfos micro-VFD circulation pumps.

11. Costs related to the development's boilers and boiler room systems total \$1,009,085 or \$5.93 per gross square feet in inflated dollars.

12. The Lochinvar natural gas-fired condensing heating boilers are in good operating condition at the present time. No problems/concerns were reported during the site review. Future replacement of the boilers is shown in Year 12, based on a twenty-year expected useful service life. Future replacement of the Smith cast-iron sectional boiler is shown in Year 5 (assumed limited usage as boiler is utilized for supplemental heating).
13. The development features a pneumatic control system governing interior environment conditions. Based on discussions with management, the pneumatic control system is inefficient at the present time and several spaces are experiencing balancing issues (i.e., lack of heat versus remainder of building). An allowance to replace the pneumatic control system with a direct digital control (DDC) system is shown in Year 1, however a full detailed review by a qualified design professional is required to determine the full scope and cost(s) of the required replacement work. The existing pneumatic control actuators, air compressor, air dryer, and various peripherals are included as part of the replacement/upgrade work.
14. No problems/concerns were reported with regards to the heating and domestic hot water circulation pumps. Future replacement costs are shown based on pump age, observed conditions, and pump expected useful service lives. Replacement of the variable frequency drive controllers serving the hydronic heat circulation pumps is shown in Year 12.
15. No problems/concerns were reported with regards to the domestic hot water (DHW) generation system. Future replacement of the Navien DHW boiler is shown in Year 13, based on a twenty-year expected useful service life. Replacement of the indirect-fired DHW storage tank is shown in Year 8, based on a fifteen-year expected useful service life.
16. Based on discussions with management, underground fuel oil storage tanks are present at the development and were previously utilized as the heating source for the building's boilers. These tanks have reportedly been abandoned in place.

Building Mechanical and Electrical Systems

Major building systems include the fire sprinkler system (equipped with a backflow preventer), distribution piping for domestic hot and cold water, hydronic heat, sanitary wastewater, and natural gas services, heating, ventilation and air conditioning (HVAC) services, electrical, fire detection, security, and elevators.

17. Costs related to the development's mechanical and electrical systems total \$3,699,755 or \$21.75 per gross square feet in inflated dollars.

18. The building is equipped with a wet sprinkler system (city pressure supply). This system also includes a backflow preventer, a device designed to keep stagnant sprinkler water from flowing back into the potable water system. The fire suppression system is shown being maintained and monitored during the plan's timeframe.
19. No systemic problems/concerns were reported with regards to the building's distribution piping systems (i.e., no issues with regards to pin hole leaks, pipe breakage, or back-ups reported). These distribution piping systems are shown being maintained and monitored during the plan's timeframe.
20. An array of packaged rooftop units (RTU's) facilitate space heating/cooling for various spaces. The RTU's vary in age and condition. Replacement costs are shown based on RTU age, observed conditions, and a normal expected useful service life of twenty-years.
21. Three split-system air conditioners facilitate space cooling for the computer rooms. The air conditioners are operating beyond the end of their normal expected useful service lives, and replacement costs are shown in Years 1 and 16.
22. Three ductless mini-split system air conditioners facilitate space cooling for various interior spaces. Replacement costs are shown based on air conditioner age, observed conditions, and a normal expected useful service life of fifteen-years.
23. Eight heating and ventilation units serve various interior spaces including the blue gymnasium and locker rooms. The H/V units appear to date to the 1997 rehabilitation. Costs for as-needed replacement of the H/V units are shown in Years 1-8.
24. Each classroom is equipped with a pneumatically-controlled ventilator that is equipped with a wet heat loop from the boiler plant. Management reports several of the ventilator dampers are problematic at the present time; the ventilators date to the 1997 rehabilitation. Replacement of the ventilators is shown in Year 1, concurrent with replacement/upgrade of the building's pneumatic control system.
25. A series of rooftop-mounted exhausters facilitate ventilation for the building. Periodic costs to carry out as-needed replacement of the exhausters are shown every five years starting in Year 1.
26. Periodic costs to carry out as-needed electrical system/component repairs/replacement are shown every five years starting in Year 1. It is recommended that periodic infrared thermographic inspections and analysis of utility connections, main switchboard, breaker panels, disconnect switches, etc. be carried out to identify potential 'hot spots' in the electrical equipment that may cause potentially hazardous situations or a major source of system inefficiency. These inspections are shown being handled out of operating accounts.

27. No problems or concerns were reported with regards to the security camera system (reportedly fully upgraded in recent years). Periodic costs for as-needed camera and component repairs/replacement are shown every five years starting in Year 3.
28. The building contains solar photovoltaic panels and inverters on the northern upper roof level. Based on discussions with management, the PV panels and inverters are not the responsibility of the development; subsequently no costs for these components are shown during the plan's timeframe.
29. The building contains a central fire alarm control panel monitoring hardwired end devices. No active trouble signals were illuminated during the site review. Future replacement of the fire alarm control panel including end devices is shown in Year 6.
30. The facility is equipped with a public address system for paging/announcements/instructions. Management reports 50% of the PA system is not in operation. Costs for a system upgrade/replacement are shown in Year 1 (including clock system, which is also problematic).
31. A video entry intercom system regulates visitor entry at the main entrance. Future replacement of the intercom system is shown in Year 15, based on a twenty-year expected useful service life.
32. A pair of hydraulic-type elevators facilitate vertical access within the building. The elevators were reportedly modernized circa 2021 and are maintained under the terms of a full service contract. Future costs to renovate the cab interiors and replace door operators are shown in Year 14. Future modernization of the elevators is not anticipated during the plan's timeframe. No problems/concerns were reported with regards to the vertical platform lift (recently replaced); the platform lift is shown being maintained and monitored during the plan's timeframe.

Building Architectural Systems

The building predominantly contains flat roofs constructed utilizing a mechanically fastened Ethylene Propylene Diene Monomer (EPDM) roof assembly. The exterior walls are predominantly clad in brick and stone masonry; limited standing seam metal cladding is also present at select upper wall areas. Exterior caulking is installed along window and door perimeters as well as at masonry control joints. A mix of single and double leaf metal and fiberglass doors are present at main entries, emergency exits, and service spaces. A metal overhead door is present at the food receiving area. Automatic door operators are present at the main entrance and vestibule. Exterior windows are prefinished aluminum-framed fixed and operable models containing insulating glass units (IGU's). Building and soffit-mounted light fixtures facilitate illumination along the building perimeter. Interior spaces include hallways and stairways, classrooms, office/administrative spaces, a pair of gymnasiums, a cafeteria, restrooms, and a food preparation kitchen. Interior finishes/materials include a mix of suspended ceiling tile, painted wall and ceiling surfaces, vinyl composition tile (VCT), hardwood, epoxy, rubber flooring, and carpeting.

33. Costs related to the development's architectural systems total \$10,634,956 or \$62.52 per gross square feet in inflated dollars.

34. Localized cracking and deteriorated cementitious parge coat were observed within the exposed portions of concrete foundation wall. Repairs to the concrete foundation walls are included as part of exterior wall rehabilitation work discussed below. No problems/concerns were reported with regards to the building's main structural framing systems. Isolated areas of apparent efflorescence/moisture staining were observed within the abandoned boiler spaces (i.e., underside of concrete ceilings within basement level) of the building. An allowance for future as-needed concrete repairs and waterproofing efforts are shown in Year 6.
35. An elevated concrete walkway is present at the cafeteria emergency egress. Exposed and corroded reinforcing steel as well as concrete spalls were observed on the underside of the walkway. Costs to carry out concrete repairs as well as addressing corroded reinforcing steel are shown in Year 1.
36. The exterior doorways appear to vary in age and condition (i.e., majority of doors appear to date to 1997 rehabilitation, select doors appear to predate rehabilitation). Replacement of the exterior doors is shown based on doorway age, observed conditions, and doorway expected useful service lives. Future replacement of the food receiving area metal overhead door is shown in Year 5. Future replacement of the automatic door operators is shown in Year 10.
37. Several areas of mortar loss, cracking, spalls/deterioration, exposed and corroded reinforcing steel were observed within the brick and stone cladding, particularly at the north facing elevation of the original building (i.e., exterior walls over roof level). Furthermore, several steel lintels present above window openings exhibit corrosion and deformation. Costs to carry out repairs in the form of repointing, crack repairs, localized brick and stone replacement, and repairs to deteriorated lintel are shown in Year 1. However, it is recommended that these areas of deteriorated be further reviewed by a building envelope professional to determine the full scope and costs of required repair/replacement work.
38. Cohesive/adhesive failures were observed within the exterior caulking. Replacement costs are shown in Years 1 and 16, based on a fifteen-year expected useful service life.
39. The exterior windows reportedly date to the 1997 rehabilitation and are reportedly in good operating condition at the present time. Isolated failed insulating glass units (IGU's) were noted during the site review and costs for localized replacement are shown in Years 1-15 (failure of an IGU is ultimately apparent when condensation forms between the glass panes). Future replacement of the exterior windows is shown in Year 16.
40. The majority of the exterior light fixtures appear to have been upgraded with light-emitting diode (LED) models in recent years. Future replacement of the building and soffit-mounted light fixtures is shown in Year 11.
41. Based on discussions with management, areas of active roof leakage are occurring through the EPDM roof assemblies. Several areas of pronounced water ponding were also noted during the site review. Furthermore, localized deteriorated

- seams as well as soft spots (i.e., potentially saturated insulation) were noted during the site review. Based on roof surface serial numbers, the majority of the EPDM roof assemblies date to the 1997 rehabilitation. Replacement of the EPDM roof assemblies is shown in Year 1, based on the roofs exceeding a normal expected useful service life of twenty-years.
42. Pronounced vegetation growth and evidence of poor drainage was noted at select canopies (i.e., northeast corner of building). Costs to replace these roof sections are included with the aforementioned EPDM roof assembly replacement work.
43. No problems/concerns were reported with regards to the metal access roof doorways and roof hatches. Future replacement costs are shown in Year 5.
44. Common hallway, main lobby, and stairway finishes include suspended ceiling tile, painted wall surfaces, vinyl composition tile (VCT), and rubber flooring (stairways). Periodic costs to carry out as-needed repainting efforts are shown throughout the plan's timeframe. Localized cracking/wear was observed within the VCT flooring. Replacement of the VCT flooring is shown in Years 1-5. Costs for as-needed replacement of the rubber flooring are shown every five years starting in Year 1. Future replacement of the suspended ceiling tile is shown in Year 15. Periodic costs to carry out as-needed replacement of the solid core wood interior passage doors are shown every five years starting in Year 1.
45. Approximately 70% of the interior light fixtures are light-emitting diode (LED) models. The remaining light fixtures are shown being converted/replaced out of operating accounts.
46. Classroom, library, cafeteria, as well as office/administration space finishes/materials include suspended ceiling tile, painted wall surfaces, vinyl composition tile (VCT), and broadloom carpeting (library and select offices). Costs for as-needed repainting efforts are shown throughout the plan's timeframe. Future replacement of the suspended ceiling tile is shown starting in Year 15. Replacement of the VCT flooring and carpeting is shown based on floor covering age, observed conditions, and floor covering expected useful service lives.
47. Periodic costs to carry out as-needed replacement of classroom cabinetry sets, projectors, furnishings, fixtures, equipment, etc. are shown annually starting in Year 1.
48. The building contains two gymnasiums, one gymnasium contains wood flooring and the second gym contains rubberized flooring (i.e., blue gym). Several displaced suspended ceiling tiles were noted within the blue gymnasium and pose a potential overhead risk. Replacement of the suspended ceiling tile including carrying out insulation improvements is shown in Year 1. Replacement of the rubberized flooring present within the blue gym is shown in Year 5. Costs to refinish the wood gymnasium flooring are shown in Years 1 and 11 (including replacement of wood stage flooring in Year 1). Periodic costs to carry out as-needed gymnasium/stage equipment replacement are shown every five years starting in Year 1.
49. No problems/concerns were reported with regards to the cafeteria commercial-grade food preparation equipment. Periodic costs to carry out as-needed equipment replacement are shown every five years starting in Year 2.

50. Locker room and common restroom finishes/materials include suspended ceiling tile, painted ceiling surfaces (girl's locker room), painted wall surfaces, ceramic tile walls, as well as epoxy flooring. Costs for repainting efforts are shown over five year periods starting in Years 1 and 11 (including as-needed repairs to ceramic tile walls). Future replacement of the suspended ceiling tile is shown in Year 15. Costs to refurbish the epoxy flooring are shown in Years 1 and 11. Periodic costs for as-needed fixture, accessory, and equipment replacement are shown throughout the plan's timeframe.

Additional Notes:

1. The Physical Assessment of the property was conducted on April 19th, 2022. Additional information was provided to ON-SITE INSIGHT by site staff and others. OSI was represented on this assignment by Matthew Chown. We would like to thank site staff for their assistance.
2. Regular updates of this plan are recommended to ensure careful monitoring of major building systems and to adjust the program to accommodate unanticipated circumstances surrounding the buildings, operations, and/or occupants.
3. This report is delivered subject to the conditions on Appendix A, *Statement of Delivery*.



View of widespread pattern cracking and evidence of fatigue within asphalt-paved surface parking area as seen at rear of development



Additional view of pattern cracking and evidence of fatigue within asphalt pavement



View of northeast corner lower asphalt parking lot – note similar deterioration/age related wear



View of east end concrete site steps and metal railings – railings exhibit paint peeling/weathering



View of concrete deterioration within walkway
as seen towards southeast corner of building



View of cast-in-place concrete retaining wall present towards
northeast corner of building – note concrete spalls/deterioration



View of concrete segmental block masonry
retaining walls as seen at north end of building –
several displaced masonry units noted



View of development wood entry signage



View of metal chain-link dumpster enclosure as seen at food receiving area



View of Lochinvar natural gas-fired primary hydronic heating boilers



View of Smith cast-iron sectional supplemental heating boiler



View of natural gas-fired domestic hot water boiler and indirect-fired domestic hot water storage tank facilitating domestic hot water generation for facility



View of base-mounted hydronic heat circulation pumps – 20-horsepower rating each



View of hydronic heat circulation pump variable frequency drive controller



View of air compressor forming part of pneumatic control system governing interior environment conditions



View of main incoming water supply line for fire suppression system – note backflow preventer is in place



View of sample of split-system air conditioner (one of several) – unit in photograph serves computer room



View of packaged rooftop unit serving media center (one of several RTU's serving facility)



View of ductless mini-split system air conditioners serving media center



View of packaged rooftop HVAC unit serving cafeteria



View of typical classroom unit ventilator – several ventilators are reportedly problematic at the present time



View of solar photovoltaic array – reportedly not development responsibility



View of solar photovoltaic array inverter – reportedly not development responsibility



View of central fire alarm control panel monitoring hardwired end devices at building



View of elevator cab interiors – one of two hydraulic-type elevators serving development



View of elevator hydraulic power unit – both recently modernized per management



View of vertical platform lift – recently replaced



View of typical building architecture as seen at south elevation



View of cracking within exposed portion of concrete foundation wall – cementitious parge coat exhibits delaminations/wear



View of concrete spalls and exposed/corroded reinforcing steel as seen at underside of elevated concrete walkway present towards northwest corner of building



View of main entry doorway framing exhibiting corrosion/wear



View of double leaf hollow metal service doors exhibiting age related wear/weathering



View of localized deteriorated brick masonry units at window corner



View of localized mortar loss within brick masonry cladding



View of pronounced stone cladding deterioration as seen at north facing elevation of original building—also note exposed and corroded reinforcing steel



Additional view of corroded/deteriorated reinforcing steel within stone cladding



View of steel lintel exhibiting corrosion/deterioration as seen at north elevation of original building



View of brick masonry chimney – widespread mortar loss/deterioration noted



Exterior windows are prefinished aluminum-framed fixed and operable models containing insulating glass units (IGU's) – limited failed IGU's noted during assessment



View of deteriorated caulking (i.e., cohesive failures) as seen at window perimeter



Several areas of water ponding observed on EPDM roof surfaces



Additional view of water ponding on roof surfaces as seen at lower roof area



View of poorly adhered section of roof membrane



View of EPDM roof assembly conditions as seen at uppermost roof (i.e., original building)



View of widespread vegetation growth and evidence of poor drainage as seen at canopy roof located towards northeast corner of building



View of typical common hallway finishes – suspended ceiling tile, painted wall surfaces, and vinyl composition tile (VCT) flooring



View of typical common stairway finishes – note rubber landings and stair treads



View of typical classroom finishes – suspended ceiling tile, painted wall surfaces, and vinyl composition tile (VCT) flooring



Localized cracking/deterioration noted within VCT flooring



View of metal locker conditions



View teacher's lounge finishes - suspended ceiling tile, painted wall surfaces, and vinyl composition tile (VCT) flooring



View of typical common restroom finishes and fixtures – age related wear



View of typical locker area finishes and fixtures



View of main gym finishes – note wood flooring



View of blue gym finishes – note rubberized flooring – also note displaced suspended ceiling tiles and potential overhead risk



View of main gym stage flooring exhibiting age related wear



View of main gym bleachers – reportedly in serviceable condition



View of sample of office space finishes – suspended ceiling tile, painted wall surfaces, and broadloom carpeting



View of library finishes and furnishings – suspended ceiling tile, painted wall surfaces, and broadloom carpeting



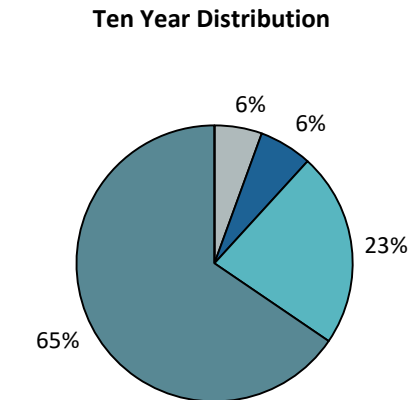
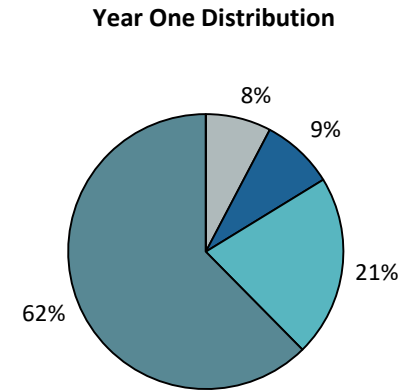
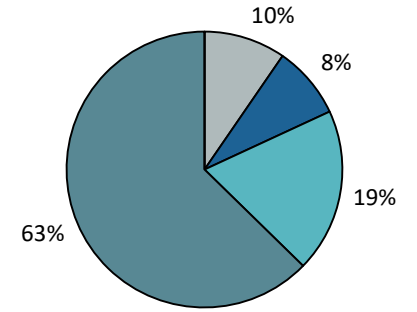
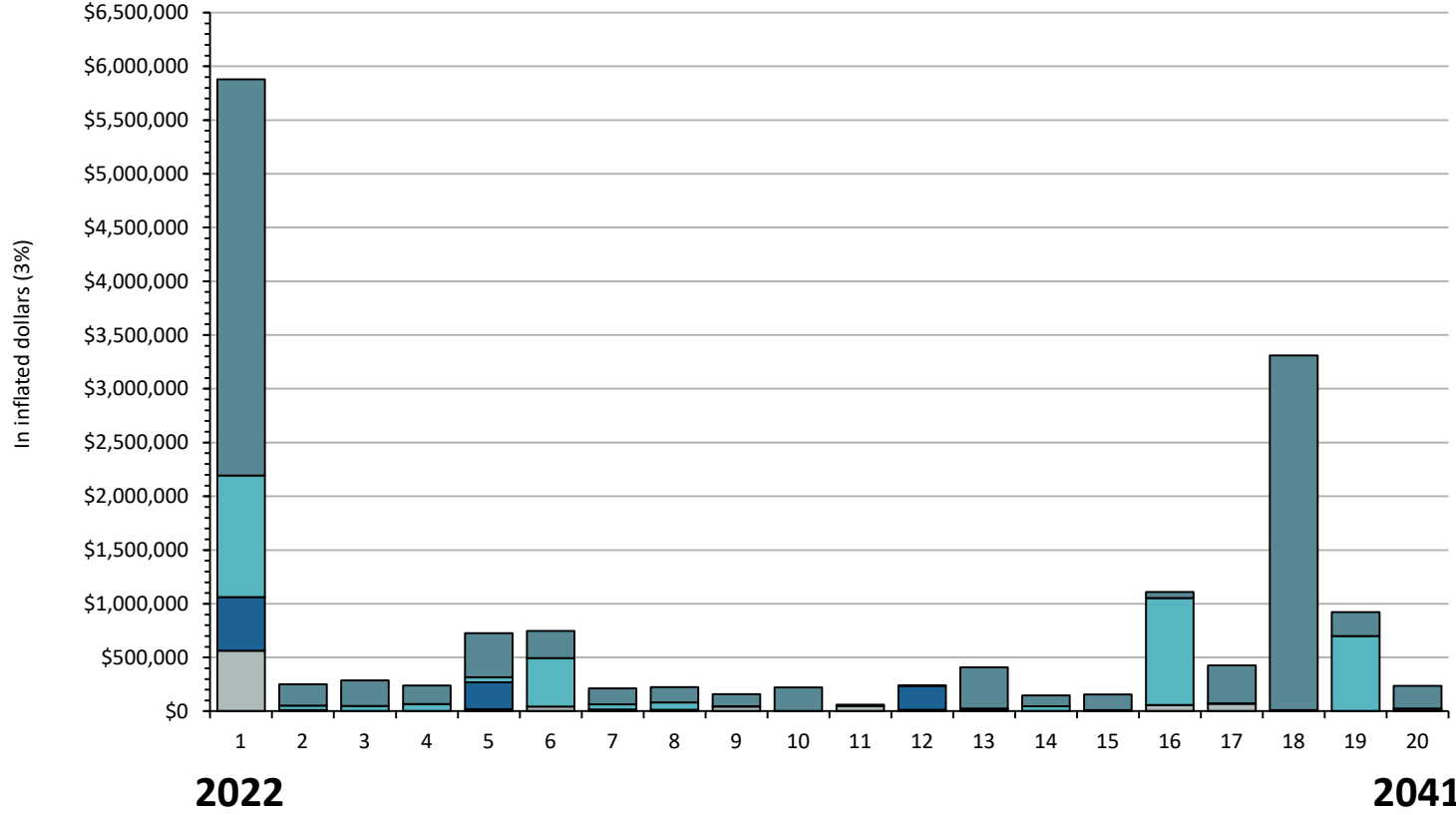
View of commercial kitchen finishes and equipment



View of cafeteria finishes – suspended ceiling tile, painted wall surfaces, and vinyl composition tile (VCT) flooring

Capital Needs Summary

Ottoson Middle School



Total Costs by Building System (inflated dollars)

	In Year 1	In Years 1-10	In Years 1-20
Site Systems	\$563,404 or \$3.31 /GSF	\$687,968 or \$4.04 /GSF	\$899,219 or \$5.29 /GSF
Mechanical Room	\$500,000 or \$2.94 /GSF	\$768,800 or \$4.52 /GSF	\$1,009,085 or \$5.93 /GSF
Building Mech. & Elec.	\$1,129,000 or \$6.64 /GSF	\$1,909,108 or \$11.22 /GSF	\$3,699,755 or \$21.75 /GSF
Building Architectural	\$3,687,299 or \$21.68 /GSF	\$5,584,297 or \$32.83 /GSF	\$10,634,956 or \$62.52 /GSF
In inflated dollars:	\$5,879,703 or \$34.56 /GSF	\$8,950,174 or \$52.61 /GSF	\$16,243,016 or \$95.48 /GSF
In current dollars:	\$5,879,703 or \$34.56 /GSF	\$8,560,446 or \$50.32 /GSF	\$12,929,830 or \$76.01 /GSF

Capital Needs Summary

Ottoson Middle School Arlington, MA

OSI Ref: **22032**
Property Age: **25 Years**
Financing: **Conventional**

Number of Buildings: **1**
Total Number of Units: **170114**
Occupancy: **Public Middle School**

	2022 Year 1	2023 Year 2	2024 Year 3	2025 Year 4	2026 Year 5	2027 Year 6	2028 Year 7	2029 Year 8	2030 Year 9	2031 Year 10
Site Systems										
Surface	\$463,404	\$9,418	\$0	\$0	\$18,008	\$43,043	\$10,918	\$0	\$43,177	\$0
Site Distribution Systems	\$100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Site Sub-Total	\$563,404	\$9,418	\$0	\$0	\$18,008	\$43,043	\$10,918	\$0	\$43,177	\$0
Mechanical Room										
Boilers	\$500,000	\$0	\$0	\$0	\$251,045	\$0	\$4,657	\$0	\$0	\$0
Boiler Room Systems	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$13,098	\$0	\$0
Mechanical Sub-Total	\$500,000	\$0	\$0	\$0	\$251,045	\$0	\$4,657	\$13,098	\$0	\$0
Building Mech. & Electrical										
Mechanical	\$1,071,500	\$42,745	\$44,027	\$67,203	\$46,709	\$48,110	\$49,553	\$63,339	\$1,900	\$1,957
Electrical	\$57,500	\$0	\$5,305	\$0	\$0	\$403,112	\$0	\$6,149	\$0	\$0
Elevators	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Mechanical & Electrical Sub-Total	\$1,129,000	\$42,745	\$49,332	\$67,203	\$46,709	\$451,222	\$49,553	\$69,488	\$1,900	\$1,957
Building Architectural										
Structural and Exterior	\$533,790	\$3,273	\$3,371	\$3,472	\$9,766	\$30,926	\$3,794	\$3,908	\$4,025	\$108,854
Roof Systems	\$2,502,750	\$0	\$0	\$0	\$8,441	\$0	\$0	\$0	\$0	\$0
Hallways	\$85,585	\$77,853	\$80,188	\$54,735	\$56,377	\$41,148	\$30,442	\$31,356	\$0	\$0
Stairways	\$45,845	\$0	\$0	\$0	\$0	\$53,147	\$0	\$0	\$0	\$0
Main Lobby	\$33,870	\$0	\$0	\$0	\$0	\$8,521	\$0	\$0	\$0	\$0
Classrooms/Library	\$80,314	\$77,573	\$119,845	\$82,298	\$84,767	\$93,106	\$89,929	\$92,627	\$95,406	\$98,268
Office/Administration	\$16,588	\$17,086	\$17,598	\$18,126	\$32,492	\$0	\$0	\$0	\$0	\$0
Gymnasiums	\$242,067	\$0	\$0	\$0	\$205,540	\$11,593	\$0	\$0	\$0	\$0
Cafeteria	\$87,000	\$10,300	\$2,652	\$0	\$0	\$0	\$11,941	\$0	\$0	\$0
Locker Rooms	\$35,235	\$0	\$0	\$0	\$0	\$2,898	\$0	\$0	\$0	\$0
Restrooms	\$24,256	\$13,083	\$13,476	\$13,880	\$14,296	\$12,172	\$12,538	\$12,914	\$13,301	\$13,700
Building Architectural Sub-Total	\$3,687,299	\$199,167	\$237,130	\$172,510	\$411,679	\$253,512	\$148,643	\$140,804	\$112,732	\$220,822
Total Capital Costs	\$5,879,703	\$251,330	\$286,462	\$239,713	\$727,441	\$747,777	\$213,771	\$223,390	\$157,808	\$222,779

Ottoson Middle School

Costs on these two pages are aggregated by category from the Capital Needs worksheets which follow. Total capital costs on these two pages are carried forward to line F of the Replacement Reserve Analysis(es) that follow.

2032 Year 11	2033 Year 12	2034 Year 13	2035 Year 14	2036 Year 15	2037 Year 16	2038 Year 17	2039 Year 18	2040 Year 19	2041 Year 20	
\$49,899	\$12,657	\$0	\$0	\$0	\$57,847	\$69,368	\$0	\$0	\$21,480	Site Systems
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	Surface Site Distribution Systems
\$49,899	\$12,657	\$0	\$0	\$0	\$57,847	\$69,368	\$0	\$0	\$21,480	Site Sub-Total
\$0	\$224,246	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	Mechanical Room
\$0	\$0	\$16,040	\$0	\$0	\$0	\$0	\$0	\$0	\$0	Boilers Boiler Room Systems
\$0	\$224,246	\$16,040	\$0	\$0	\$0	\$0	\$0	\$0	\$0	Mechanical Sub-Total
\$2,016	\$2,076	\$2,139	\$2,203	\$2,269	\$983,856	\$2,407	\$2,479	\$700,551	\$2,630	Building Mech. & Electrical
\$10,079	\$0	\$7,129	\$0	\$6,807	\$11,685	\$0	\$8,264	\$0	\$0	Mechanical Electrical Elevators
\$0	\$0	\$0	\$44,056	\$0	\$0	\$0	\$0	\$0	\$0	
\$12,095	\$2,076	\$9,267	\$46,259	\$9,076	\$995,541	\$2,407	\$10,744	\$700,551	\$2,630	Mechanical & Electrical Sub-Total
\$19,053	\$4,398	\$4,530	\$4,666	\$4,806	\$2,975,531	\$0	\$0	\$0	\$0	Building Architectural
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	Structural and Exterior Roof Systems
\$47,702	\$35,291	\$36,350	\$0	\$41,671	\$98,221	\$85,121	\$87,674	\$46,901	\$0	Hallways
\$61,612	\$0	\$0	\$0	\$46,272	\$71,425	\$0	\$0	\$0	\$0	Stairways
\$9,878	\$0	\$0	\$0	\$18,051	\$11,451	\$0	\$0	\$0	\$0	Main Lobby
\$31,887	\$25,923	\$80,382	\$27,501	\$82,363	\$92,624	\$87,379	\$90,000	\$92,700	\$95,481	Classrooms/Library
\$5,161	\$5,315	\$5,475	\$5,639	\$39,530	\$15,600	\$16,068	\$16,550	\$17,047	\$0	Office/Administration
\$123,034	\$0	\$0	\$0	\$0	\$15,580	\$0	\$0	\$0	\$0	Gymnasiums
\$12,095	\$13,842	\$3,564	\$0	\$64,890	\$0	\$16,047	\$0	\$0	\$0	Cafeteria
\$47,353	\$0	\$0	\$0	\$18,976	\$3,895	\$0	\$0	\$0	\$0	Locker Rooms
\$26,128	\$17,583	\$18,110	\$18,653	\$39,237	\$16,359	\$16,849	\$17,355	\$17,876	\$0	Restrooms
\$383,903	\$102,352	\$148,411	\$56,460	\$355,796	\$3,300,686	\$221,465	\$211,580	\$174,524	\$95,481	Building Architectural Sub-Total
\$445,897	\$341,331	\$173,719	\$102,718	\$364,872	\$4,354,074	\$293,240	\$222,324	\$875,075	\$119,592	Total Capital Costs

Ottoson Middle School

SITE SYSTEMS

SITE SYSTEMS																	
(Expected Useful life)																	
Replacement Items		Quantity	Cost per unit in 2022 \$\$	Total Cost in 2022 \$\$	AGE (Years)	EUL (Years)	Replacement Schedule						Notes				
Year of action AND duration of project																	
SURFACE																	
<i>cost per mgmt.</i>																	
Roadways and Parking	40,432	sf	10.00	\$404,320	25	20	1					in	1	Year	Asphalt-paved surface parking areas and roadways; cracking, depressions, and evidence of fatigue; costs to scarify and resurface		
Crack-Fill and Sealcoat	40,432	sf	0.30	\$12,130	5+	5	6	/11	/16			in	1	Year	Asphalt pavement; future costs for preventative maintenance repairs in the form of crack filling, sealcoating, and restriping		
Sidewalks (Asphalt)	8,521	tfl sf													Concrete walkways, steps, landings, etc.; conditions vary; recent repairs carried out; periodic sectional repair/replacement costs		
Concrete Flatwork	1,704	sf	20.00	\$34,084	25	8	1	/9	/17			in	1	Year	Mix of stone, segmental concrete block masonry, and cast-in-place concrete retaining walls; periodic costs for sectional repairs/replacement		
Retaining Walls	530	tfl lf													Metal railings at site steps/walkways; weathering/paint peeling		
Guardrail	1	ls	15000.00	\$15,000	25	40	1	/6	/11	/16		in	1	Year	Costs included with flatwork above		
Fencing	1,045	tfl lf		\$0	varies	15									Metal chain-link fencing; serviceable condition		
Dumpsters & Enclosures	261	lf	35.00	\$9,144	varies	20	2	/7	/12	/17		in	1	Year	Periodic costs for sectional repairs/replacement		
Play Equipment	1	ea	4750.00	\$4,750	10	15	5	/20				in	1	Year	Metal chain-link dumpster enclosure and concrete pad		
Site Lighting (Pole Fixtures)	6	ea	1250.00	\$7,500	10	15	5	/20				in	1	Year	Future enclosure replacement costs		
Site Lighting (Bollards)		ea													Pole-mounted light-emitting diode (LED) fixtures		
Landscaping	1	ls	10000.00	\$10,000	varies	20	1	/6	/11	/16		in	1	Year	Fixture replacement costs; weathered light poles - Operating		
Entry Signage	1	ea	3750.00	\$3,750	25	20	5					in	1	Year	Lawn areas, trees, shrubs, and other plantings		
Periodic allowances for larger-scale pruning and/or upgrade needs																	
Wood entry signage; serviceable condition																	
Replacement costs																	
SITE DISTRIBUTION SYSTEMS																	
Gas Lines	1	ls		\$0	varies	60									Utility supplied		
Sanitary Lines	1	ls		\$0	varies	60									No problems evident or reported; Monitor		
Cold Water Lines	1	ls		\$0	varies	60									Municipal sewerage system		
Electric Distribution	1	ls		\$0	varies	60									No problems evident or reported; Monitor		
Stormwater Drainage	1	ls	100000.00	\$100,000	varies	60	1					in	1	Year	Municipal water supply		
Irrigation System	1	ls		\$0	~10	15									No problems evident or reported; Monitor		
Stormwater drainage system reportedly problematic																	
Costs for improvements pending detailed review by qualified professional																	
Irrigation system serving abutting town-owned recreational area; reportedly town responsibility; no costs shown																	

Projected Capital Needs Over Twenty Years

COSTS PROJECTED AT 3%																			SITE SYSTEMS	
Replacement Items	Year 1 2022	Year 2 2023	Year 3 2024	Year 4 2025	Year 5 2026	Year 6 2027	Year 7 2028	Year 8 2029	Year 9 2030	Year 10 2031	Year 11 2032	Year 12 2033	Year 13 2034	Year 14 2035	Year 15 2036	Year 16 2037	Year 17 2038	Year 18 2039	Year 19 2040	Year 20 2041
SURFACE																				
Roadways and Parking	\$404,320	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Crack-Fill and Sealcoat	\$0	\$0	\$0	\$0	\$0	\$14,062	\$0	\$0	\$0	\$0	\$16,301	\$0	\$0	\$0	\$0	\$18,898	\$0	\$0	\$0	\$0
Sidewalks (Asphalt)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Concrete Flatwork	\$34,084	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$43,177	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$54,695	\$0	\$0	\$0
Retaining Walls	\$15,000	\$0	\$0	\$0	\$0	\$17,389	\$0	\$0	\$0	\$0	\$20,159	\$0	\$0	\$0	\$0	\$23,370	\$0	\$0	\$0	\$0
Guardrail	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Fencing	\$0	\$9,418	\$0	\$0	\$0	\$0	\$10,918	\$0	\$0	\$0	\$0	\$12,657	\$0	\$0	\$0	\$0	\$14,673	\$0	\$0	\$0
Dumpsters & Enclosures	\$0	\$0	\$0	\$0	\$5,346	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$8,329
Play Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Site Lighting (Pole Fixtures)	\$0	\$0	\$0	\$0	\$8,441	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$13,151
Site Lighting (Bollards)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Landscaping	\$10,000	\$0	\$0	\$0	\$0	\$11,593	\$0	\$0	\$0	\$0	\$13,439	\$0	\$0	\$0	\$0	\$15,580	\$0	\$0	\$0	\$0
Entry Signage	\$0	\$0	\$0	\$0	\$4,221	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
SITE DISTRIBUTION SYSTEMS																				
Gas Lines	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sanitary Lines	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Cold Water Lines	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Electric Distribution	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Stormwater Drainage	\$100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Irrigation System	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

MECHANICAL ROOM

Replacement Schedule

Page 32

Projected Capital Needs Over Twenty Years

	Costs projected at 3%																	MECHANICAL ROOM			
Replacement Items	Year 1 2022	Year 2 2023	Year 3 2024	Year 4 2025	Year 5 2026	Year 6 2027	Year 7 2028	Year 8 2029	Year 9 2030	Year 10 2031	Year 11 2032	Year 12 2033	Year 13 2034	Year 14 2035	Year 15 2036	Year 16 2037	Year 17 2038	Year 18 2039	Year 19 2040	Year 20 2041	
BOILERS																					
Boilers - Lochinvar	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$166,108	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Boilers - Smith	\$0	\$0	\$0	\$0	\$251,045	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Controls	\$500,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Air Compressor/Air Dryer	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Variable Frequency Drives	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$23,532	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Boiler Water Pumps	\$0	\$0	\$0	\$0	\$0	\$0	\$4,657	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Heating Water Pumps	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$34,606	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Chilled Water Pumps	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Flue Exhaust	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
BOILER ROOM SYSTEMS																					
Boiler Room Piping/Valves	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
3-Way Valve & Controller	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Heat Exchanger for Bldg. Heat	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Domestic Hot Water Generation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$16,040	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Domestic Hot Water Storage	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$8,302	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Domestic Hot Water Pumps	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,797	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Boiler Room Piping Insulation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Fuel Oil Storage	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Fuel Oil Transfer System	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Sump Pumps	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	

Ottoson Middle School

BUILDING MECHANICAL AND ELECTRICAL

(Expected Useful life)

Replacement Items	Quantity	Cost per unit in 2022 \$\$	Total Cost in 2022 \$\$	AGE (Years)	EUL (Years)	Replacement Schedule			Notes
BUILDING MECHANICAL									
Compactors	ea								
Building Fire Suppression	1 ls		\$0	25	100				Wet fire suppression system equipped with backflow preventer Maintain and monitor
Distribution Piping Systems	1 ls		\$0	25+	50				No systemic problems/concerns reported Maintain and monitor
Packaged RTU's	1 ea	cost per mgmt. 300000.00	\$300,000	25	20	1	in	1 Year	Packaged rooftop unit serving cafeteria Replacement costs - ~600 MBH gas heat, ~27.5-tons of cooling
Packaged RTU's	1 ea	300000.00	\$300,000	1	20	19	in	1 Year	Packaged rooftop units serving cafeteria
Packaged RTU's	2 ea	300000.00	\$600,000	4 to 5	20	16	in	1 Year	Replacement costs - ~600 MBH gas heat, ~27.5-tons of cooling
Packaged RTU's	3 ea	cost per mgmt. 20000.00	\$60,000	25	20	1	in	1 Year	Packaged rooftop units serving media center (RTU-7, 8, 9) Replacement costs - 40 MBH gas heat, ~2-tons of cooling
Packaged RTU's	3 ea	avg cost per unit 30000.00	\$90,000	1	20	19	in	1 Year	Packaged rooftop units serving classroom and media center (RTU-10) Replacement costs - 70-120 MBH gas heat, ~3.5-7.5-tons of cooling
Split-System A/C	3 ea	cost per mgmt. 10000.00	\$30,000	25	15	1 /16	in	1 Year	Split-system air conditioners serving computer rooms (CU-1,2, 3) Replacement costs - 3-tons of cooling capacity
Ductless A/C	1 ea	10000.00	\$10,000	7	15	8	in	1 Year	Ductless mini-split system air conditioners serving various spaces
Ductless A/C	2 ea	10000.00	\$20,000	11	15	4 /19	in	1 Year	Replacement costs
Heating/Ventilation Units	8 ea	costs pending specifications 40000.00	\$320,000	25	25	1	over	8 Years	Interior heating and ventilation units equipped with heating coils Replacement costs
Classroom Ventilators	64 ea	+/- costs pending specifications 10000.00	\$640,000	25	25	1	in	1 Year	Ventilation units equipped with hydronic heating, pneumatic actuators
Ventilation & Exhaust	1 ls	7500.00	\$7,500	25	20	1 /6 /11 /16	over	5 Years	System replacement/upgrade costs; A/C units - Operating Rooftop-mounted powered exhausters Annual costs for as-needed replacement
BUILDING ELECTRICAL									
Building Power Wiring	1 ls	7500.00	\$7,500	25+	40	1 /6 /11 /16	in	1 Year	No systemic problems/concerns reported; periodic costs to carry out as-needed component replacement
Security System	1 ls	5000.00	\$5,000	2	5	3 /8 /13 /18	in	1 Year	Security camera system; recently upgraded; future costs for as-needed camera system and component repairs/replacement
Solar PV	326 ea		\$0	7	20				Solar photovoltaic panels and inverters; reportedly not development responsibility; no costs shown
Emergency Lights	1 ls		\$0	varies	10				Emergency battery-powered light fixtures Maintain and monitor - Operating
Smoke / Fire Detection	1 ls	340228.00	\$340,228	14	20	6	in	1 Year	Central fire alarm control panel monitoring hardwired end devices Future replacement costs including end devices
Public Address System/Clocks	1 ls	costs pending specifications 50000.00	\$50,000	25	30	1	in	1 Year	Central system for paging/announcements/instructions 50% of system not in operation including clocks; system upgrade/replacement costs
Signaling / Communication	1 ls	4500.00	\$4,500	5	20	15	in	1 Year	Video entry intercom system at main entrance; no problems/concerns reported; replacement costs
BUILDING ELEVATORS									
Shafts and Doorways	2 ea		\$0	25	30				Hydraulic-type elevators; reportedly maintained under the terms of a full service contract
Elevator Cabs	2 ea	15000.00	\$30,000	1	15	14	in	1 Year	Elevator cab interiors Costs for renovation efforts including door operator replacement
Controller/Dispatcher	2 ea		\$0	1	20				Elevator controller/dispatcher equipment
Machine Room Equipment	2 ea		\$0	1	30				Maintained under the terms of a full service contract Hydraulic-type elevators; reportedly maintained under the terms of a full service contract
Accessible Platform Lift	1 ea		\$0	1	25				Vertical platform lift; recently replaced; no problems/concerns reported Maintain and monitor - Operating

Projected Capital Needs Over Twenty Years

	Costs projected at 3%														BUILDING MECHANICAL AND ELECTRICAL									
Replacement Items	Year 1 2022	Year 2 2023	Year 3 2024	Year 4 2025	Year 5 2026	Year 6 2027	Year 7 2028	Year 8 2029	Year 9 2030	Year 10 2031	Year 11 2032	Year 12 2033	Year 13 2034	Year 14 2035	Year 15 2036	Year 16 2037	Year 17 2038	Year 18 2039	Year 19 2040	Year 20 2041				
BUILDING MECHANICAL																								
Compactors	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0				
Building Fire Suppression	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0				
Distribution Piping Systems	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0				
Packaged RTU's	\$300,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0				
Packaged RTU's	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$934,780	\$0	\$0	\$510,730	\$0				
Packaged RTU's	\$60,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0				
Packaged RTU's	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$153,219	\$0				
Split-System A/C	\$30,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$46,739	\$0	\$0	\$0	\$0				
Ductless A/C	\$0	\$0	\$0	\$21,855	\$0	\$0	\$0	\$12,299	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$34,049	\$0				
Heating/Ventilation Units	\$40,000	\$41,200	\$42,436	\$43,709	\$45,020	\$46,371	\$47,762	\$49,195	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0				
Classroom Ventilators	\$640,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0				
Ventilation & Exhaust	\$1,500	\$1,545	\$1,591	\$1,639	\$1,688	\$1,739	\$1,791	\$1,845	\$1,900	\$1,957	\$2,016	\$2,076	\$2,139	\$2,203	\$2,269	\$2,337	\$2,407	\$2,479	\$2,554	\$2,630				
BUILDING ELECTRICAL																								
Building Power Wiring	\$7,500	\$0	\$0	\$0	\$0	\$8,695	\$0	\$0	\$0	\$0	\$10,079	\$0	\$0	\$0	\$0	\$11,685	\$0	\$0	\$0	\$0				
Security System	\$0	\$0	\$5,305	\$0	\$0	\$0	\$0	\$6,149	\$0	\$0	\$0	\$0	\$7,129	\$0	\$0	\$0	\$0	\$8,264	\$0	\$0				
Solar PV	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0				
Emergency Lights	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0				
Smoke / Fire Detection	\$0	\$0	\$0	\$0	\$0	\$394,417	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0				
Public Address System/Clocks	\$50,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0				
Signaling / Communication	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$6,807	\$0	\$0	\$0	\$0	\$0				
BUILDING ELEVATORS																								
Shafts and Doorways	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0				
Elevator Cabs	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$44,056	\$0	\$0	\$0	\$0	\$0	\$0				
Controller/Dispatcher	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0				
Machine Room Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0				
Accessible Platform Lift	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0				

Ottoson Middle School

BUILDING ARCHITECTURE

Replacement Items		Quantity	Cost per unit in 2022 \$\$	Total Cost in 2022 \$\$	AGE (Years)	EUL (Years)	Replacement Schedule		Notes
(Expected Useful life)									
Year of action AND duration of project									
Notes									
STRUCTURE									
Foundation	1,520 lf		\$0	25+	100			Cast-in-place concrete foundation walls; localized cracking and deteriorated cementitious parge coat; costs with masonry work below	
Framing	1 ls	20000.00	\$20,000	25+	100	6	in 1 Year	Localized evidence of water infiltration within basement level	
Elevated Walkway	220 sf	25.00	\$5,500	25	100	1	in 1 Year	Costs for as-needed repairs	
Elevated concrete walkway at cafeteria emergency egress; exposed and corroded reinforcing steel noted; repair costs									
BUILDING EXTERIOR									
Exterior Common Doors	19 ea	3750.00	\$71,250	25	35	10	in 1 Year	Fiberglass doors; predominantly at main entries; localized abrasions	
Emergency Egress Doors	1 ea		\$0	<5	35			Future replacement costs; interim needs - Operating	
Emergency Egress Doors	3 ttl							Single leaf fiberglass emergency egress doors	
Emergency Egress Doors	1 ea	1750.00	\$1,750	varies	35	5	in 1 Year	Maintain and monitor - Operating	
Emergency Egress Doors	1 ea	3500.00	\$3,500	25	35	10	in 1 Year	Single leaf hollow metal emergency egress doors	
Emergency Egress Doors	9 ttl							Costs to replace doorway present at food receiving area	
Service Doors	2 ea	1750.00	\$3,500	25	35	1 /6 /11 /16	in 1 Year	Double leaf hollow metal emergency egress doors	
Overhead Door	1 ea	3750.00	\$3,750	25	30	5	in 1 Year	Future replacement costs	
Automatic Door Operators	2 ea	2750.00	\$5,500	5	15	10	in 1 Year	Single and double leaf hollow metal service doors	
Exterior Walls - Masonry	72,960 ttl sf	costs pending specifications						Costs for as-needed replacement	
Exterior Walls - Metal	10,944 sf	40.00	\$437,760	varies	60	1	in 1 Year	Metal overhead door present at food receiving area	
Exterior Caulking	2,235 sf		\$0	25+	40			Abrasions/wear; replacement costs	
Steel Lintels	9,865 lf	8.50	\$83,853	25	15	1	in 1 Year	Automatic door operators present at main entrance and vestibule	
Exterior Ceilings	3,105 sf		\$0	25	30			Replacement costs	
Window Frames	12,709 ttl sf	costs pending specifications						Brick and stone cladding; several areas of mortar loss, cracking, and deterioration (rear of original building); repair costs	
Window Frames	1,906 sf	25.00	\$47,660	25	35	1	over 15 Years	Painted metal cladding along upper wall areas at original building	
Window Frames	12,709 sf	150.00	\$1,906,380	25	35	16	in 1 Year	Weathering/finish wear; refurbishment costs included w/ above	
Storm / Screen Windows	ea							Caulking installed at window and door perimeters, control joints	
Canopies	1 ls		\$0	25	25			Cohesive/adhesive failures; replacement costs; future with windows	
Building Mounted Lighting	1 ls	7500.00	\$7,500	varies	15	11	in 1 Year	Steel lintels; corrosion and paint peeling noted	
Refurbishment costs included with Exterior Walls above									
Soffit siding at north end of building; serviceable condition									
Maintain and monitor - Operating									
Prefinished aluminum-framed fixed and operable windows									
Costs for as-needed replacement of failed and cracked IGU's									
Prefinished aluminum-framed fixed and operable windows									
Future replacement costs									
Canopy structures; pronounced vegetation growth and poor drainage noted from available vantage points; costs included with roof below									
Fixtures for site/security/entry area illumination									
Most have been retrofitted with LEDs; Replace fixtures in future									

Costs projected at 3%																		BUILDING ARCHITECTURE		
Replacement Items	Year 1 2022	Year 2 2023	Year 3 2024	Year 4 2025	Year 5 2026	Year 6 2027	Year 7 2028	Year 8 2029	Year 9 2030	Year 10 2031	Year 11 2032	Year 12 2033	Year 13 2034	Year 14 2035	Year 15 2036	Year 16 2037	Year 17 2038	Year 18 2039	Year 19 2040	Year 20 2041
STRUCTURE																				
Foundation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Framing	\$0	\$0	\$0	\$0	\$0	\$23,185	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Elevated Walkway	\$5,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
BUILDING EXTERIOR																				
Exterior Common Doors	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$92,965	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Emergency Egress Doors	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Emergency Egress Doors	\$0	\$0	\$0	\$0	\$1,970	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Emergency Egress Doors	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,567	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Service Doors	\$3,500	\$0	\$0	\$0	\$0	\$4,057	\$0	\$0	\$0	\$0	\$4,704	\$0	\$0	\$0	\$0	\$5,453	\$0	\$0	\$0	\$0
Overhead Door	\$0	\$0	\$0	\$0	\$4,221	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Automatic Door Operators	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$7,176	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Exterior Walls - Masonry	\$437,760	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Exterior Walls - Metal	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Exterior Caulking	\$83,853	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Steel Lintels	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Exterior Ceilings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Window Frames	\$3,177	\$3,273	\$3,371	\$3,472	\$3,576	\$3,683	\$3,794	\$3,908	\$4,025	\$4,146	\$4,270	\$4,398	\$4,530	\$4,666	\$4,806	\$0	\$0	\$0	\$0	\$0
Window Frames	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	#####	\$0	\$0	\$0	\$0
Storm / Screen Windows	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Canopies	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Building Mounted Lighting	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$10,079	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Ottoson Middle School

BUILDING ARCHITECTURE--continued

BUILDING ARCHITECTURE--continued		(Expected Useful life)				Replacement Schedule		
Replacement Items	Quantity	Cost per unit in 2022 \$\$	Total Cost in 2022 \$\$	AGE (Years)	EUL (Years)	Year of action AND duration of project		Notes
ROOF SYSTEMS								
Structure	83,425 sf		\$0	25+	40			Flat roof structure; several areas of water ponding noted
		cost per mgmt.						Costs to address water ponding included with roof work below
Roof Covering	83,425 sf	30.00	\$2,502,750	25	20	1	in 1 Year	Mechanically fastened EPDM roof assembly; reportedly dates to rehabilitation; limited replacement to date; replacement costs
Roof Covering	100 sf		\$0	25	40			Limited standing seam metal roofs; good overall conditions
								Maintain and monitor - Operating
Roof Drainage	1 ls		\$0	25	20			Internal roof drains; several areas of water ponding, isolated displaced strainer domes; costs included with roof replacement work above
Skylights	ea							
Penthouses	ea							
Access Doors & Hatches	1 ls	7500.00	\$7,500	varies	35	5	in 1 Year	Metal access doorway, roof hatches; fair condition
								Future replacement costs
Chimneys	1 ls		\$0	40+	40			Brick masonry chimneys; mortar loss, cracking/deterioration
								Repair costs included with Exterior Walls above
HALLS								
Hallway Walls	76,485 sf	1.00	\$76,485	varies	5	1 /6 /11 /16	over 3 Years	Painted wall surfaces; periodic costs to carry out as-needed repainting efforts
Hallway Ceilings	25,045 sf	5.50	\$137,748	25	40	15	over 5 Years	Suspended ceiling tile; serviceable condition
		cost per mgmt.						Future replacement costs
Hallway Floors	25,045 sf	10.00	\$250,450	25	20	1	over 5 Years	Vinyl composition tile (VCT) flooring; localized cracking/wear
								Replacement costs
Hallway Doors	1 ls	10000.00	\$10,000	25	35	1 /6 /11 /16	in 1 Year	Predominantly solid core wood passage doors; localized damage/wear
								Costs for as-needed replacement of passage doors
Hallway Railings	lf							
Hallway Interior Lighting	1 ls		\$0	varies	20			Mix of T8 fluorescent tube and light-emitting diode (LED) fixtures
								Reportedly 70% are LED; maintain and monitor - Operating
STAIRS								
	5,562 sf	5.50	\$30,591	25	40	15	in 1 Year	Suspended ceiling tile; future replacement costs
Stair Walls and Ceilings	18,035 sf	1.00	\$18,035	varies	5	1 /6 /11 /16	in 1 Year	Painted wall surfaces; costs for repainting efforts
	5,562 ttl sf							Rubber flooring; localized wear
Stair Floors	1,391 sf	20.00	\$27,810	25	30	1 /6 /11 /16	in 1 Year	Costs for as-needed replacement
								Stairway fire doors
Stair Doors	1 ls		\$0	25	35			Maintain and monitor - Operating
								Stairway railings
Stair Railings	1 ls		\$0	25	35			Maintain and monitor - Operating

BUILDING ARCHITECTURE--continued																				
Costs projected at 3%																				
Replacement Items	Year 1 2022	Year 2 2023	Year 3 2024	Year 4 2025	Year 5 2026	Year 6 2027	Year 7 2028	Year 8 2029	Year 9 2030	Year 10 2031	Year 11 2032	Year 12 2033	Year 13 2034	Year 14 2035	Year 15 2036	Year 16 2037	Year 17 2038	Year 18 2039	Year 19 2040	Year 20 2041
ROOF SYSTEMS																				
Structure	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Roof Covering	#####	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Roof Covering	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Roof Drainage	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Skylights	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Penthouses	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Access Doors & Hatches	\$0	\$0	\$0	\$0	\$8,441	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Chimneys	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
HALLS																				
Hallway Walls	\$25,495	\$26,260	\$27,048	\$0	\$0	\$29,556	\$30,442	\$31,356	\$0	\$0	\$34,263	\$35,291	\$36,350	\$0	\$0	\$39,720	\$40,912	\$42,139	\$0	\$0
Hallway Ceilings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$41,671	\$42,921	\$44,209	\$45,535	\$46,901	\$0
Hallway Floors	\$50,090	\$51,593	\$53,140	\$54,735	\$56,377	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Hallway Doors	\$10,000	\$0	\$0	\$0	\$0	\$11,593	\$0	\$0	\$0	\$0	\$13,439	\$0	\$0	\$0	\$0	\$15,580	\$0	\$0	\$0	\$0
Hallway Railings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Hallway Interior Lighting	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
STAIRS																				
Stair Walls and Ceilings	\$18,035	\$0	\$0	\$0	\$0	\$20,908	\$0	\$0	\$0	\$0	\$24,238	\$0	\$0	\$0	\$46,272	\$28,098	\$0	\$0	\$0	\$0
Stair Floors	\$27,810	\$0	\$0	\$0	\$0	\$32,239	\$0	\$0	\$0	\$0	\$37,374	\$0	\$0	\$0	\$0	\$43,327	\$0	\$0	\$0	\$0
Stair Doors	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Stair Railings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Ottoson Middle School

BUILDING ARCHITECTURE--*continued*

BUILDING ARCHITECTURE--continued																		
				(Expected Useful life)														
Replacement Items	Quantity	Cost per unit in 2022 \$\$	Total Cost in 2022 \$\$	AGE (Years)	EUL (Years)	Replacement Schedule				Notes								
Year of action AND duration of project																		
Notes																		
LOBBIES/MAIL FACILITIES																		
Lobby Walls & Ceilings	2,652	sf	4.50	\$11,934	25	40	15		in	1	Year	Suspended ceiling tile; future replacement costs						
	7,350	sf	1.00	\$7,350	varies	5	1	/6 /11 /16	in	1	Year	Painted wall surfaces; costs for repainting efforts						
			<i>cost per mgmt.</i>										Vinyl composition tile (VCT) flooring; localized cracking/wear					
Lobby Floors	2,652	sf	10.00	\$26,520	25	20	1		in	1	Year	Replacement costs						
CLASSROOMS/LIBRARY																		
Classroom Ceilings	64,954	sf	5.50	\$357,247	25	40	15		over	10	Years	Suspended ceiling tile; serviceable condition						
													Future as-needed replacement costs					
			<i>cost per mgmt.</i>										Painted wall surfaces					
Classroom Walls	87,270	sf	1.00	\$87,270	varies	10	1	/11	over	10	Years	Costs for as-needed repainting efforts						
Classroom Floors	56,587	sf	10.00	\$565,870	25	20	1		over	10	Years	Vinyl composition tile (VCT) flooring; localized cracking/wear						
													Replacement costs					
													Broadloom carpeting present within library; serviceable condition					
Library Floors	8,367	sf	4.50	\$37,652	10	10	3	/13	in	1	Year	Replacement costs						
Classroom Cabinetry	1	ls	5000.00	\$5,000	varies	5	1	/6 /11 /16	in	1	Year	Wood cabinetry sets present within select classrooms						
													Costs for as-needed replacement					
													Projectors, furnishings, fixtures, equipment, etc.					
Classroom Miscellaneous	1	ls	50000.00	\$50,000	varies	5	1	/6 /11 /16	over	5	Years	Annual costs for as-needed replacement						
OFFICE/ADMINISTRATION																		
Office Ceilings	9,103	sf	5.50	\$50,067	25	40	15		over	5	Years	Suspended ceiling tile; serviceable condition						
													Future replacement costs					
			<i>cost per mgmt.</i>										Painted wall surfaces					
Office Walls	19,200	sf	1.00	\$19,200	varies	10	1	/11	over	5	Years	Costs for as-needed repainting efforts						
Office Floor Covering	6,374	sf	10.00	\$63,740	25	20	1		over	5	Years	Vinyl composition tile (VCT) flooring; localized cracking/wear						
													Replacement costs					
													Broadloom carpeting					
Office Floor Covering	2,729	sf	4.50	\$12,281	varies	10	5	/15	in	1	Year	Replacement costs						
Office Equipment	1	ls		\$0	varies	8						Standard office equipment						
													Maintain and monitor - Operating					
GYMNASIUMS																		
Gymnasium Ceilings	11,519	sf	<i>costs pending specifications</i>		40+	40						Roof framing within wood gym; maintain and monitor						
	9,131	sf	15.00	\$136,965	40+	40	1		in	1	Year	Suspended tile in blue gym; displacement/overhead risk; costs including insulation						
													Painted masonry; localized paint peeling/wear					
Gymnasium Walls	25,230	sf	1.50	\$37,845	10+	10	1	/11	in	1	Year	Repainting costs						
Gymnasium Floors	9,131	sf	20.00	\$182,620	~15	20	5		in	1	Year	Rubberized flooring within blue gym; serviceable condition						
													Future replacement costs including weight room					
													Wood flooring within remaining gymnasium; age related wear					
Gymnasium Floors	9,712	sf	4.50	\$43,704	25	10	1	/11	in	1	Year	Costs for refinishing efforts						
Gymnasium Stage	1,807	sf	7.50	\$13,553	25	20	1		in	1	Year	Wood stage; age related wear						
													Replacement costs					
													Gymnasium dividers, curtains, bleachers, basketball nets, padding, etc.					
Gymnasium/Stage Equipment	1	ls	10000.00	\$10,000	varies	5	1	/6 /11 /16	in	1	Year	Costs for as-needed equipment repairs/replacement						

	Costs projected at 3%															BUILDING ARCHITECTURE--continued									
Replacement Items	Year 1 2022	Year 2 2023	Year 3 2024	Year 4 2025	Year 5 2026	Year 6 2027	Year 7 2028	Year 8 2029	Year 9 2030	Year 10 2031	Year 11 2032	Year 12 2033	Year 13 2034	Year 14 2035	Year 15 2036	Year 16 2037	Year 17 2038	Year 18 2039	Year 19 2040	Year 20 2041					
LOBBIES/MAIL FACILITIES																									
Lobby Walls & Ceilings	\$7,350	\$0	\$0	\$0	\$0	\$8,521	\$0	\$0	\$0	\$0	\$9,878	\$0	\$0	\$0	\$18,051	\$11,451	\$0	\$0	\$0	\$0					
Lobby Floors	\$26,520	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0					
CLASSROOMS/LIBRARY																									
Classroom Ceilings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$54,037	\$55,658	\$57,328	\$59,047	\$60,819	\$62,643					
Classroom Walls	\$8,727	\$8,989	\$9,258	\$9,536	\$9,822	\$10,117	\$10,420	\$10,733	\$11,055	\$11,387	\$11,728	\$12,080	\$12,443	\$12,816	\$13,200	\$13,596	\$14,004	\$14,424	\$14,857	\$15,303					
Classroom Floors	\$56,587	\$58,285	\$60,033	\$61,834	\$63,689	\$65,600	\$67,568	\$69,595	\$71,683	\$73,833	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0					
Library Floors	\$0	\$0	\$39,944	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$53,682	\$0	\$0	\$0	\$0	\$0	\$0	\$0					
Classroom Cabinetry	\$5,000	\$0	\$0	\$0	\$0	\$5,796	\$0	\$0	\$0	\$0	\$6,720	\$0	\$0	\$0	\$0	\$7,790	\$0	\$0	\$0	\$0					
Classroom Miscellaneous	\$10,000	\$10,300	\$10,609	\$10,927	\$11,255	\$11,593	\$11,941	\$12,299	\$12,668	\$13,048	\$13,439	\$13,842	\$14,258	\$14,685	\$15,126	\$15,580	\$16,047	\$16,528	\$17,024	\$17,535					
OFFICE/ADMINISTRATION																									
Office Ceilings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$15,146	\$15,600	\$16,068	\$16,550	\$17,047	\$0					
Office Walls	\$3,840	\$3,955	\$4,074	\$4,196	\$4,322	\$0	\$0	\$0	\$0	\$0	\$5,161	\$5,315	\$5,475	\$5,639	\$5,808	\$0	\$0	\$0	\$0	\$0					
Office Floor Covering	\$12,748	\$13,130	\$13,524	\$13,930	\$14,348	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0					
Office Floor Covering	\$0	\$0	\$0	\$0	\$13,822	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$18,575	\$0	\$0	\$0	\$0	\$0					
Office Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0					
GYMNASIUMS																									
Gymnasium Ceilings	\$136,965	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0					
Gymnasium Walls	\$37,845	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$50,861	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0					
Gymnasium Floors	\$0	\$0	\$0	\$0	\$205,540	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0					
Gymnasium Floors	\$43,704	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$58,735	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0					
Gymnasium Stage	\$13,553	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0					
Gymnasium/Stage Equipment	\$10,000	\$0	\$0	\$0	\$0	\$11,593	\$0	\$0	\$0	\$0	\$13,439	\$0	\$0	\$0	\$0	\$15,580	\$0	\$0	\$0	\$0					

BUILDING ARCHITECTURE--continued

Replacement Schedule

CAFETERIA

LOCKER ROOMS

RESTROOMS

BUILDING ARCHITECTURE--continued																				
Costs projected at 3%																				
Replacement Items	Year 1 2022	Year 2 2023	Year 3 2024	Year 4 2025	Year 5 2026	Year 6 2027	Year 7 2028	Year 8 2029	Year 9 2030	Year 10 2031	Year 11 2032	Year 12 2033	Year 13 2034	Year 14 2035	Year 15 2036	Year 16 2037	Year 17 2038	Year 18 2039	Year 19 2040	Year 20 2041
CAFETERIA																				
Cafeteria Ceilings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$64,890	\$0	\$0	\$0	\$0	\$0
Cafeteria Walls	\$9,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$12,095	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Cafeteria Floors	\$78,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Cafeteria Equipment	\$0	\$10,300	\$0	\$0	\$0	\$0	\$11,941	\$0	\$0	\$0	\$0	\$13,842	\$0	\$0	\$0	\$0	\$16,047	\$0	\$0	\$0
Walk-In Freezer Compressor	\$0	\$0	\$2,652	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,564	\$0	\$0	\$0	\$0	\$0	\$0	\$0
LOCKER ROOMS																				
Locker Room Ceilings	\$2,942	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,954	\$0	\$0	\$0	\$18,976	\$0	\$0	\$0	\$0	\$0
Locker Room Walls	\$4,013	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,392	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Locker Room Floors	\$18,281	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$24,567	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Locker Room Fixtures	\$2,500	\$0	\$0	\$0	\$0	\$2,898	\$0	\$0	\$0	\$0	\$3,360	\$0	\$0	\$0	\$0	\$3,895	\$0	\$0	\$0	\$0
Locker Room Equipment	\$7,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$10,079	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
RESTROOMS																				
Restroom Ceilings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$20,024	\$0	\$0	\$0	\$0	\$0
Restroom Walls	\$2,202	\$2,268	\$2,336	\$2,406	\$2,478	\$0	\$0	\$0	\$0	\$0	\$2,959	\$3,048	\$3,140	\$3,234	\$3,331	\$0	\$0	\$0	\$0	\$0
Restroom Floors	\$6,740	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$9,057	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Restroom Floors	\$4,814	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Restroom Fixtures	\$7,500	\$7,725	\$7,957	\$8,195	\$8,441	\$8,695	\$8,955	\$9,224	\$9,501	\$9,786	\$10,079	\$10,382	\$10,693	\$11,014	\$11,344	\$11,685	\$12,035	\$12,396	\$12,768	\$0
Restroom Accessories	\$3,000	\$3,090	\$3,183	\$3,278	\$3,377	\$3,478	\$3,582	\$3,690	\$3,800	\$3,914	\$4,032	\$4,153	\$4,277	\$4,406	\$4,538	\$4,674	\$4,814	\$4,959	\$5,107	\$0

Appendix A: Statement of Delivery

Our Capital Needs Assessment (the "CNA" or the "Report") on the subject property is delivered subject to the following terms and conditions:

1. The report and analysis may be relied upon by you as a description of the observed current conditions of the building and site improvements, only as of the date of this report, and with the knowledge that certain limitations and exceptions within the report that are the reflective of the scope of services as defined in our contract. Although care has been taken in the performance of this assessment, ON-SITE INSIGHT, Inc. (and/or its representatives) makes no representations regarding latent or concealed defects that may exist and no warranty or guarantee is expressed or implied. This report is made only in the best exercise of our ability and judgment. Conclusions reached in this report assume current and continuing responsible ownership and competent property management.
2. We have undertaken no formal evaluation of environmental concerns, including but not limited to asbestos containing materials (ACMs), lead-based paint, chlorofluorocarbons (CFCs), polychlorinated biphenyls (PCBs), and mildew/mold.
3. Conclusions in this report are based on estimates of the age and normal working life of various items of equipment and/or statistical comparisons. Actual conditions can alter the useful life of any item. When an item needs immediate replacement depends on many factors, including previous use/misuse, irregularity of servicing, faulty manufacture, unfavorable conditions, Acts of God and unforeseen circumstances. Certain components that may be working when we made our inspection might deteriorate or break in the future without notice.
4. To prepare this report, we used historic data on capital activities and costs, blueprints (when available), and current prices for capital actions. We have not independently verified this information, have assumed that it is reliable, but assume no responsibility for its accuracy.
5. Unless otherwise noted in the report, we assume that all building components meet code requirements in force when the property was built.
6. If accessibility issues are referenced in the report, the site elements, common areas, and dwelling units at the development were examined for compliance with the requirements of the Uniform Federal Accessibility Standards (UFAS), and for Massachusetts properties, the Massachusetts Architectural Accessibility Board (AAB). The methodology employed in undertaking this examination is adapted from a Technical Assistance Guide (TAG-88-11) titled "Supplemental Information About the Section 504 Transition Plan Requirements" published by the Coordination and Review section of the U.S. Department of Justice Civil Rights Division, and the AAB Rules and Regulations, 521 CMR effective July 10, 1987. The Guide also incorporates the requirements of UFAS, published April 1, 1988 by the General Services Administration, the Department of Defense, the Department of Housing and Urban Development, and the U.S. Postal Service. Changes in legislation and/or regulations may make some observations moot.
7. Response Actions and estimated costs of responses were developed by ON-SITE INSIGHT, Inc. If additional structural work is necessary, costs for some Response Actions may exceed estimates. Whenever the Response Action is to remove, reposition, or modify walls, a competent structural engineer should be retained before any work is done, because such investigation may disclose that a Response Action is either more costly than estimated, or is not possible.
8. Conclusions reached in this report assume current and continuing responsible ownership and competent property management. Any unauthorized reliance on or use of the report, including any of its information or conclusions, will be at the third party's sole risk. For the same reasons, no warranties or representation, express or implied in this report, are made to any such third party. Reliance on the report by the client and all authorized parties will be subject to the terms, conditions and limitations stated in the contract Terms and Conditions. The limitation of liability defined in the Terms and Conditions is the aggregate limit of ON-SITE INSIGHT's liability to the client and all relying parties.
9. Regular updates of this plan are recommended to ensure careful monitoring of major building systems and to adjust the program to accommodate unanticipated circumstances surrounding the buildings, operations, and/or occupants.

Massachusetts School Building Authority

Next Steps to Finalize Submission of your FY 2014 Statement of Interest

Thank you for submitting your FY 2014 Statement of Interest (SOI) to the MSBA electronically. **Please note, the District's submission is not yet complete.** The District is required to print and mail a hard copy of the SOI to the MSBA along with the required supporting documentation, which is described below.

Each SOI has two Certification pages that must be signed by the Superintendent, the School Committee Chair, and the Chief Executive Officer*. Please make sure that **both** certifications contained in the SOI have been signed and dated by each of the specified parties and that the hardcopy SOI is submitted to the MSBA with **original signatures**.

SIGNATURES: Each SOI has two (2) Certification pages that must be signed by the District.

In some Districts, two of the required signatures may be that of the same person. If this is the case, please have that person sign in both locations. Please do not leave any of the signature lines blank or submit photocopied signatures, as your SOI will be incomplete.

**Local chief executive officer: In a city or town with a manager form of government, the manager of the municipality; in other cities, the mayor; and in other towns, the board of selectmen unless, in a city or town, some other municipal office is designated as the chief executive office under the provisions of a local charter.*

VOTES: Each SOI must be submitted with the proper vote documentation. This means that (1) the required governing bodies have voted to submit each SOI, (2) the specific vote language required by the MSBA has been used, and (3) the District has submitted a record of the vote in the format required by the MSBA.

- School Committee Vote:** Submittal of all SOIs must be approved by a vote of the School Committee.
 - For documentation of the vote of the School Committee, Minutes of the School Committee meeting at which the vote was taken must be submitted with the original signature of the Committee Chairperson. The Minutes must contain the actual text of the vote taken which should be substantially the same as the MSBA's SOI vote language.
- Municipal Body Vote:** SOIs that are submitted by cities and towns must be approved by a vote of the appropriate municipal body (e.g., City Council/ Aldermen/Board of Selectmen) in addition to a vote of the School Committee.
 - Regional School Districts do not need to submit a vote of the municipal body.
 - For the vote of the municipal governing body, a copy of the text of the vote, which shall be substantially the same as the MSBA's SOI vote language, must be submitted with a certification of the City/Town Clerk that the vote was taken and duly recorded, and the date of the vote must be provided.

CLOSED SCHOOLS: Districts must download the report from the "Closed School" tab, which can be found on the District Main page. Please print this report, which then must be signed by the Superintendent, the School Committee Chair, and the Chief Executive Officer. A signed report, with original signatures must be included with the District's hard copy SOI submittal. **If a District submits multiple SOIs, only one copy of the Closed School information is required.**

ADDITIONAL DOCUMENTATION FOR SOI PRIORITIES #1 AND #3: If a District selects Priority #1 and/or Priority #3, the District is required to submit additional documentation with its SOI.

- l If a District selects Priority #1, Replacement or renovation of a building which is structurally unsound or otherwise in a condition seriously jeopardizing the health and safety of the school children, where no alternative exists, the MSBA requires a hard copy of the engineering or other report detailing the nature and severity of the problem and a written professional opinion of how imminent the system failure is likely to manifest itself. The District also must submit photographs of the problematic building area or system to the MSBA.
- l If a District selects Priority #3, Prevention of a loss of accreditation, the MSBA requires the full accreditation report(s) and any supporting correspondence between the District and the accrediting entity.

ADDITIONAL INFORMATION: In addition to the information required with the SOI hard copy submittal, the District may also provide any reports, pictures, or other information they feel will give the MSBA a better understanding of the issues identified at a facility.

If you have any questions about the SOI process please contact Brian McLaughlin at 617-720-4466 or Brian.McLaughlin@massschoolbuildings.org.

Massachusetts School Building Authority

School District Arlington

District Contact Diane Johnson TEL: (781) 316-3511

Name of School Arlington High

Submission Date 3/4/2014

SOI CERTIFICATION

To be eligible to submit a Statement of Interest (SOI), a district must certify the following:

- The district hereby acknowledges and agrees that this SOI is NOT an application for funding and that submission of this SOI in no way commits the MSBA to accept an application, approve an application, provide a grant or any other type of funding, or places any other obligation on the MSBA.
- The district hereby acknowledges that no district shall have any entitlement to funds from the MSBA, pursuant to M.G.L. c. 70B or the provisions of 963 CMR 2.00.
- The district hereby acknowledges that the provisions of 963 CMR 2.00 shall apply to the district and all projects for which the district is seeking and/or receiving funds for any portion of a municipally-owned or regionally-owned school facility from the MSBA pursuant to M.G.L. c. 70B.
- The district hereby acknowledges that this SOI is for one existing municipally-owned or regionally-owned public school facility in the district that is currently used or will be used to educate public PreK-12 students and that the facility for which the SOI is being submitted does not serve a solely early childhood or Pre-K student population.
- After the district completes and submits this SOI electronically, the district must sign the required certifications and submit one signed original hard copy of the SOI to the MSBA, with all of the required documentation described under the "Vote" tab, on or before the deadline.
- The district will schedule and hold a meeting at which the School Committee will vote, using the specific language contained in the "Vote" tab, to authorize the submission of this SOI. This is required for cities, towns, and regional school districts.
- Prior to the submission of the hard copy of the SOI, the district will schedule and hold a meeting at which the City Council/Board of Aldermen or Board of Selectmen/equivalent governing body will vote, using the specific language contained in the "Vote" tab, to authorize the submission of this SOI. This is not required for regional school districts.
- On or before the SOI deadline, the district will submit the minutes of the meeting at which the School Committee votes to authorize the Superintendent to submit this SOI. The District will use the MSBA's vote template and the vote will specifically reference the school and the priorities for which the SOI is being submitted. The minutes will be signed by the School Committee Chair. This is required for cities, towns, and regional school districts.
- The district has arranged with the City/Town Clerk to certify the vote of the City Council/Board of Aldermen or Board of Selectmen/equivalent governing body to authorize the Superintendent to submit this SOI. The district will use the MSBA's vote template and submit the full text of this vote, which will specifically reference the school and the priorities for which the SOI is being submitted, to the MSBA on or before the SOI deadline. This is not required for regional school districts.
- The district hereby acknowledges that this SOI submission will not be complete until the MSBA has received all of the required vote documentation and certification signatures in a format acceptable to the MSBA.

Chief Executive Officer *

School Committee Chair

Superintendent of Schools

(signature)

(signature)

(signature)

Date

Date

Date

* Local chief executive officer: In a city or town with a manager form of government, the manager of the municipality; in other cities, the mayor; and in other towns, the board of selectmen unless, in a city or town, some other municipal office is designated to the chief executive office under the provisions of a local charter. Please note, in districts where the Superintendent is also the Local Chief Executive Officer, it is required for the same person to sign the Statement of Interest Certifications twice. Please do not leave any signature lines blank.

Massachusetts School Building Authority

School District Arlington

District Contact Diane Johnson TEL: (781) 316-3511

Name of School Arlington High

Submission Date 3/4/2014

Note

The following Priorities have been included in the Statement of Interest:

1. ☐ Replacement or renovation of a building which is structurally unsound or otherwise in a condition seriously jeopardizing the health and safety of school children, where no alternative exists.
2. ☐ Elimination of existing severe overcrowding.
3. ☐ Prevention of the loss of accreditation.
4. ☐ Prevention of severe overcrowding expected to result from increased enrollments.
5. ☐ Replacement, renovation or modernization of school facility systems, such as roofs, windows, boilers, heating and ventilation systems, to increase energy conservation and decrease energy related costs in a school facility.
6. ☐ Short term enrollment growth.
7. ☐ Replacement of or addition to obsolete buildings in order to provide for a full range of programs consistent with state and approved local requirements.
8. ☐ Transition from court-ordered and approved racial balance school districts to walk-to, so-called, or other school districts.

SOI Vote Requirement

☐ I acknowledge that I have reviewed the MSBA's vote requirements for submitting an SOI which are set forth in the Vote Tab of this SOI. I understand that the MSBA requires votes from specific parties/governing bodies, in a specific format using the language provided by the MSBA. Further, I understand that the MSBA requires certified and signed vote documentation to be submitted with the SOI. I acknowledge that my SOI will not be considered complete and, therefore, will not be reviewed by the MSBA unless the required accompanying vote documentation is submitted to the satisfaction of the MSBA.

Potential Project Scope: Renovation/ Addition

Is this SOI the District Priority SOI? YES

School name of the District Priority SOI: Arlington High

Is this part of a larger facilities plan? NO

If "YES", please provide the following:

Facilities Plan Date:

Planning Firm:

Please provide an overview of the plan including as much detail as necessary to describe the plan, its goals and how the school facility that is the subject of this SOI fits into that plan:

Please provide the current student to teacher ratios at the school facility that is the subject of this SOI: 15 students per teacher

Please provide the originally planned student to teacher ratios at the school facility that is the subject of this SOI: 15 students per teacher

Does the District have a Master Educational Plan that includes facility goals for this building and all school buildings in District? NO

Does the District have related report(s)/document(s) that detail its facilities, student configurations at each facility, and District operational budget information, both current and proposed? NO

If "NO", please note that:

If, based on the SOI review process, a facility rises to the level of need and urgency and is invited into the Eligibility Period, the District will need to provide to the MSBA a detailed Educational Plan for not only that facility, but all facilities in the District in order to move forward in the MSBA's school building construction process.

Is there overcrowding at the school facility? YES

If "YES", please describe in detail, including specific examples of the overcrowding.

From the HMFH report:

Over the years, spaces have been repurposed, re-invented, re-configured, expanded, and divided. Every school year walls are added and taken down; what may have been a right-size classroom one year then becomes two undersized classrooms the next school year. The MSBA guidelines provide for general classrooms sized between 825-950 square feet. Of all the general classrooms in the high school, only 23% meet the minimum of this guideline. Further, the majority of the specialty classrooms do not meet the guidelines. Science rooms are greatly undersized; the average room is 1,000 square feet; per the guidelines the rooms should be 1,440 square feet and this is with an assumed maximum enrollment of 23 students per class; 40% of science classes exceed 23 students, with many classes in the range of 28-30. In the case of the Science program, the undersized rooms are more than crowded, they are unsafe. Science lab experiments require space and free circulation to ensure safe procedures; the high school labs do not have enough space to provide this. The only way to alleviate the overcrowding within the current science classrooms is to provide additional classrooms.

In addition to the undersized spaces causing overcrowding difficulties, there are many classrooms with physical obstructions that hinder the ability of the teachers to teach and the students to learn. There are large columns in six classrooms, another four classrooms have been divided (out of necessity) into irregular shapes, meaning that students cannot see the front marker board and the teacher cannot see some students. A classroom was divided into two, but it is not acoustically separated, making teaching and learning difficult in the two areas. These conditions inhibit different modes of teaching and learning.

As described by one teacher:

The columns create a "challenge." It is because of them that a ceiling-mounted projector cannot be installed and used in her classroom. Therefore she needs to write much more on the white board, having to do and undo information throughout the period. This results in loss of teaching and learning time; she estimates it costs them two to three minutes every class period, this in turn results in 8 - 12 hours per school year.

The obstructed and irregular shaped rooms make up 20% of the teaching spaces. For a diagram showing these spaces, see Appendix C.

Has the district had any recent teacher layoffs or reductions? NO

If "YES", how many teaching positions were affected? 0

At which schools in the district?

Please describe the types of teacher positions that were eliminated (e.g., art, math, science, physical education, etc.).

Has the district had any recent staff layoffs or reductions? NO

If "YES", how many staff positions were affected? 0

At which schools in the district?

Please describe the types of staff positions that were eliminated (e.g., guidance, administrative, maintenance, etc.).

Please provide a description of the program modifications as a consequence of these teacher and/or staff reductions, including the impact on district class sizes and curriculum.

Does Not Apply

Please provide a detailed description of your most recent budget approval process including a description of any budget reductions and the impact of those reductions on the district's school facilities, class sizes, and educational program.

Budget target is voted by School Committee in early January, Superintendent's proposed budget is submitted to School Committee in early February, budget hearing is held end of February, budget voted by School Committee early March, Town Finance Committee holds hearing in late March, Town Meeting approves budget during spring Town Meeting, beginning at end of April and continuing until concluded. There have been no overall budget reductions since FY11.

General Description

BRIEF BUILDING HISTORY: Please provide a detailed description of when the original building was built, and the date(s) and project scopes(s) of any additions and renovations (maximum of 5000 characters).

As stated in HMFH report:

Arlington High School is a large complex (nearly 400,000 square feet) centrally located in the community. Its main façade fronts onto Massachusetts Avenue, set back from the road by a green space with mature trees. At the rear of the complex are several athletic fields (baseball, softball, football, and track and field). The school building has expanded several times since the original 1914 six-story school house. And in the 100 years of its existence general and special education, technology, sustainability, building codes, and accessibility requirements, have all greatly changed and evolved. All of these have an impact on the ability of a facility to function as it is intended and as it needs to, to serve its occupants into the future.

A thorough renovation-only of the facility would include (and in part has been identified in the On-site Insight report as attached):

- Mechanical systems replacement
- *Electrical system upgrades including an increase to the quantity of power outlets (need to eliminate the extensive use of extension cords)
- Light fixture replacement
- *Plumbing upgrades and/or replacement, including fully modernized and accessible toilet facilities, and an increase in quantity of locations and fixtures
- *Solve the water infiltration issue
- *Security upgrades
- *Technology upgrades and integration, including wireless service
- *Audio/visual systems upgrades, including new PA system, simulcast ability, telephones throughout the school, sound systems at Auditorium and Gymnasium, and Auditorium/Stage lighting
- Hazardous material abatement
- Roof replacement
- Exterior door replacement and *tie-in to the security alarm system
- Exterior window replacement
- Finishes replacement including: -flooring (abate and remove remaining vinyl asbestos tile (VAT), replace all with new)
- *ceiling treatment (provide with high acoustic and reflectance quality)
- *wall surfaces (provide durable protection, paint all)
- fixed casework (*include upgrades to plumbing as appropriate)
- *teaching surfaces (white-boards and tack-boards)
- *auditorium seating (replace and provide accessibility)
- corridor lockers and athletic lockers
- *athletic locker room upgrades
- *Accessibility upgrades throughout
- Three new elevators

*Note: these are not included in the scope (or they are minimally included) outlined in the On-site Insight report.

TOTAL BUILDING SQUARE FOOTAGE: Please provide the original building square footage PLUS the square footage of any additions.

400000

SITE DESCRIPTION: Please provide a detailed description of the current site and any known existing conditions

that would impact a potential project at the site. Please note whether there are any other buildings, public or private, that share this current site with the school facility. What is the use(s) of this building(s)? (maximum of 5000 characters).

As stated in HMFH report:

The high school is nearly 400,000 gross square feet, much larger than the MSBA guidelines would suggest it needs to be, but there are extenuating circumstances that make significant portions of the space unusable by the high school program. The complex comprises multiple buildings of different generations, added onto over the years to accommodate student enrollment and programmatic needs. The buildings include Fusco House (1914), Collomb House (1937), and Downs House (1960s). Due in part to its size and mostly due to its configuration a higher-than typical portion of the space is taken up by circulation, both in corridors and stairwells. There are 5,740 linear feet of corridor circulation and 20 sets of stairs. See Appendix A for the circulation diagram. Not only does this add to the total size of the building, it is one of the main reasons why it is difficult both to supervise students in the building and it is difficult to create a sense of place and community for the students and faculty. The net-to-gross square foot factor is the total (gross) building square feet divided by the usable (net) program square feet. This ratio is an expression of how much of the building is programmatic rooms versus circulation, toilets, and other support spaces. The high school's net-to-gross is approximately 1.77; a typical ratio for new construction is 1.50. A lower ratio indicates a more efficient building layout.

There are other programs that occupy the high school beyond those that serve the high school directly. There are town offices, town's facilities and custodial offices, the town's pre-school program, the school district's administrative offices, and the LABBB Collaborative Program. There are areas of the building that are used as storage space for other services and there is an area that has been deemed off-limits to occupants and is used for storage. The building has many underground spaces and therefore there is no opportunity to provide natural light to these areas. All told the approximate square footage usage is as follows:

Town Use 6,800 SF

School/Town Facilities 4,600 SF

Pre-School Program 16,600 SF

School District Use (includes METCO Program) 16,700 SF

LABBB Collaborative Program 9,900 SF

Community/ School Storage 10,300 SF

ADDRESS OF FACILITY: Please type address, including number, street name and city/town, if available, or describe the location of the site. (Maximum of 300 characters)

869 Massachusetts Avenue, Arlington, MA 02476

BUILDING ENVELOPE: Please provide a detailed description of the building envelope, types of construction materials used, and any known problems or existing conditions (maximum of 5000 characters).

From On-site Insight report:

Arlington High School, located at 869 Massachusetts Avenue in Arlington, MA, is a sprawling facility that was built in several stages. The original buildings date to 1913-14 and are referred to as the Old Buildings (buildings "A" & "B"). These buildings retain historic details common in that era; specifically a tall clock steeple, columned classical entry façade, and slate roof. The so called Freshman Building was added in the early 1960s. During the 1980s all of the buildings were connected to form a large interior courtyard. The buildings are predominantly brick masonry. The exception is the connector section that was constructed with a concrete masonry block façade. The interior areas are functional but dated. Most of the high school's fixtures and components are at or approaching the end of their useful service life. The facility is seen as having substantive capital needs in the coming years.

The buildings are predominantly clad in brick masonry; the Connector section (built in the early 1980s) is clad in colored and textured concrete masonry units. A section of the roof at the Old Building (Bldg B) is pitched and covered with slate shingles. This section also features a wood framed and clad clock steeple and a classically detailed entry portico. The

Connector section has roof areas covered with standing seam metal roofing. The remaining areas have generally flat roofs covered with recently installed white T.P.O. (thermoplastic polyolefin) membrane roofing system. Windows are believed to date from the 1960 and 1980 expansions. Water is infiltrating through the floor of the Old Buildings mechanical room concrete floor slab. Several sections of masonry and wood stair sets were observed at the high school. The concrete and granite stair sets vary in age and condition. A pressure treated wood stair set is located at the cafeteria courtyard. It is in fair condition. There is a mix of wood and glass, aluminum and glass, sliding glass, and flush panel metal doors throughout the facility. Exterior doors are believed to date from the 1960 and 1980 expansions, and show signs of heavy use. Evidence of repairs (frame reinforcement, added hinges) was observed on many. A wood framed and sided clock steeple rises above the B section of the Old Building and dates to the original 1914 construction. Areas of dry rot have been found in the structure and siding. In addition the clock is not currently operational. The administration and maintenance staff expressed their concern regarding hazardous materials used during the original construction of the building. Given the age of most of the school buildings this is a reasonable concern. The building sections are clad in brick and concrete block (CMU) masonry. Recent repointing and water proofing work was performed on a portion of the facility. Some deterioration noted, peeling paint observed on trip, soffits and fascia on older parts of the building. A painted wood faux balcony accents the main entry of the high school in poor overall condition, with sections of deterioration noted. There are approximately 17 wall mounted LED and HID security flood lights located straightly around the facility of various ages and conditions. Windows are a mix of wood, steel, and aluminum framed models believed to date to the 1960 and 1980 expansions, all exceeding their expected useful service life.

Has there been a Major Repair or Replacement of the EXTERIOR WALLS ? YES

Year of Last Major Repair or Replacement: 1978

Description of Last Major Repair or Replacement:

Part of most recent renovation and upgrade, re-pointing and re-mortaring as needed.

Has there been a Major Repair or Replacement of the ROOF? YES

Year of Last Major Repair or Replacement: 1998

Type Of ROOF: PVC

Description of Last Major Repair or Replacement:

Flat roofs replaced from 1998-2003 in sections.

Has there been a Major Repair or Replacement of the WINDOWS? YES

Year of Last Major Repair or Replacement: 1978

Type Of WINDOWS: Double pane aluminum windows

Description of Last Major Repair or Replacement:

Not all windows were replaced during this most recent major renovation.

MECHANICAL and ELECTRICAL SYSTEMS: Please provide a detailed description of the current mechanical and electrical systems and any known problems or existing conditions (maximum of 5000 characters).

From On-site Insight report:

The two central mechanical rooms contain the heating systems. The domestic hot water (DHW) systems are located in separate areas of the facility. The heating system consists of four, gas-fired steam boilers. The condensed (spent) steam is returned to the boilers via a main condensation receiver and several small receiver stations. The DHW system features two gas-fired boilers and one large storage and two smaller storage tanks. The heating systems are controlled by an antiquated pneumatic control systems and compressed air operated steam valves. Compressed air for this system is supplied by two air compressors, one of which was recently replaced. Several sections of the facility are heated using hydronic heat that is created by passing boiler steam through an array of heat exchangers. Hydronic heat circulation is achieved by several base-mounted pump assemblies.

The major building systems include security, fire suppression, heat/ventilation systems, air conditioning, stale air exhaust equipment, emergency egress lighting, fire/smoke detection and notification system, and elevator. The high school features and extensive closed circuit television system (CCTV) for security monitoring. The high school features a limited, street pressure, fire sprinkler system for fire suppression. Classrooms are heated and ventilated by exterior wall mounted ventilators which have exceeded their expected service life. Selected areas of the school building are air conditioned using

split-system air conditioners with a SEER rating of 10. The gymnasiums and locker rooms are ventilated and heated by interior mounted, steam heated, air handler units, which have exceeded their expected service life. Several section of the Old Building (A & B) feature "J. C." roof mounted, hydronically heated, makeup air units which have exceeded their expected service life. An array of roof mounted exhaust fans remove stale air from the building, about half of which have been recently replaced. The electrical distribution system of the high school varies widely in age, manufacture, and condition. The emergency egress lighting is a mix of wet and dry cell battery powered fixtures, varying in age and condition. Please see the On-site Insight report for greater detail in this area. There are three smoke/fire detection systems at the facility, all recently replaced. There is one hydraulic elevator which serves all floors of the facility. The elevator is located in the oldest (A) building.

Has there been a Major Repair or Replacement of the BOILERS? YES

Year of Last Major Repair or Replacement: 2014

Description of Last Major Repair or Replacement:

One of six boilers being currently replaced. Another replaced in 2010.

Has there been a Major Repair or Replacement of the HVAC SYSTEM ? YES

Year of Last Major Repair or Replacement: 2013

Description of Last Major Repair or Replacement:

Administrative 6th floor had replacement of 15 window unit air conditioners replaced with centralized, energy efficient system.

Has there been a Major Repair or Replacement of the ELECTRICAL SERVICES AND DISTRIBUTION SYSTEM? YES

Year of Last Major Repair or Replacement: 1978

Description of Last Major Repair or Replacement:

No major upgrades since last renovation.

HEATING FUEL: Which of the heating fuel types below does your building primarily rely on for heating?

Natural Gas

BUILDING INTERIOR: Please provide a detailed description of the current building interior including a description of the flooring systems, finishes, ceilings, lighting, etc. (maximum of 5000 characters).

From On-Site Insight report:

Interior spaces include hallways, classrooms, support learning areas; cafeteria and commercial kitchen; two gyms, weight room and locker/shower facilities; auditorium and stage area; school offices, school department offices, and restrooms. Most these areas have vinyl composite tile (VCT) flooring. With the exception of approximately 2%, which has been recently replaced by the maintenance staff, the VCT has exceeded its expected useful service life. Many worn areas were observed. Most of the interior fire doors are failing in that hinges have been replaced a number of times and the doors are now dragging and will not provide protection they were originally intended to provide. The interior lighting was upgraded, in phases, to all fluorescent fixtures in the past. The fluorescent lighting is a mix of different ages and bulb types. Metal recessed lockers throughout the hallways of the school's buildings, varying widely in age and condition. Stairs are covered with rubber flooring and treads in various conditions. Doors are double metal fire rated types in various conditions. Classrooms vary in size and use. Floors are VCT and the walls and ceilings are painted surfaces. Each classroom has a set of wood cabinets and shelving. Science and technology classrooms also feature furnishing specific to their individual needs. The Auditorium features acoustic wood paneled walls and some small areas of painted drywall; the ceiling is a painted surface. Flooring is a mix of replaceable wood stage paneling (considered an operating expense), carpeted aisles, and sealed concrete (under the seats). Restrooms feature painted walls and ceilings, ceramic tile floors, and standard institutional grade fixtures. Portions are aged metal types in poor condition. Some partitions have been replaced with heavy duty PVC paneling. Fixtures and accessories have been replaced on an as needed basis.

PROGRAMS and OPERATIONS: Please provide a detailed description of the current programs offered and indicate whether there are program components that cannot be offered due to facility constraints, operational

constraints, etc. (maximum of 5000 characters).

From HMFH report:

The high school has been identified as “confusing” by students, faculty, and visitors alike. Even for those that have cause to enter the school on a regular basis, directions are required. The size of the school is generous and therefore has provided opportunities over the years to be useful to meet town space needs, but its size is one of the factors that cause it to be confusing. Furthering the sense of confusion is the configuration; due to the many additions over the years, there are several continuous loop corridors on multiple levels and some portions of the school are one, four, and five levels high. Additionally, there are two floor levels that are half underground, located along the full length of the Massachusetts Avenue façade; this lack of day-light adds to the disorientation.

Should a student have to get from their World Language class on the fifth floor of Fusco over to their Math class at the far end of the Downs Building, they need to all but run (and likely actually run) to reach their next class on time. The length of travel is extensive and at times excessive. Many students pass through the central library space as a cut-through path, which is quite disruptive for those working in the library. It is a given that large buildings will generate longer lengths of travel, but due to the current configuration, there is very little opportunity to restructure the program space layout to create a more condensed circulation path for the student’s school day. For a diagram of the school’s circulation layout, see Appendix A in the Analysis of Programmatic Needs report attached.

The school programs are currently arranged departmentally and, due to the overall size of the facility, some of the programs are at a great distance from one another, creating silos and inhibiting communication and collaboration between the educators. (For a diagram of the program layout, see Appendix C.) Teaching and learning have changed significantly in the past two decades, let alone the last ten decades, collaboration is essential today. Teachers need to be able to meet to discuss interdisciplinary teaching plans and the students in their charge.

Following are the presently known missing and/or inadequate educational spaces:

- Science requires: additional classrooms and specifically Biology classrooms
- A flexible modern library “learning commons” to serve as central meeting, collaboration, study, support, and presentation space.
- Culinary Arts requires: additional instruction space and lab space, and increased size to the current Family and Consumer Science (FACS) rooms
- Special Education requires: Occupational Therapy, Physical Therapy, and Speech & Language dedicated spaces and more secure counseling spaces
- Music requires: a dedicated Instrumental Music classroom adjacent to the rest of the music program, Auditorium/Stage need wing space, fly space, and orchestra pit, and scene shop adjacency
- Visual Arts: a dedicated studio arts space
- Physical Education requires: Health classroom and Dance studio (and desires a Swimming Pool for both the athletics department and for wider community use)
- School-wide: meeting rooms, collaboration spaces, and small group rooms, there are no meeting spaces that can comfortably accommodate the faculty or large groups of students for collaborative work; an outdoor classroom
- An adequate Cafeteria that is easily able to be supervised and will accommodate the increased enrollment

The school building as configured today, after a century of additions, renovations, and on-the-fly repurposing of spaces, poses a safety and security challenge. From the principal:

While Arlington High School remains a safe environment that is primarily because of the nature of our student body and the vigilance of administration. The problems created for monitoring access to the building and supervising “attractive nuisance” spaces in the building create a burden on administration and a distraction to many students.

There are greater than 50 exterior doors. This fact alone is a security challenge, but is compounded because none of the doors are tied to a security alarm system, and it is virtually impossible to secure the school building either during or off school hours.

CORE EDUCATIONAL SPACES: Please provide a detailed description of the Core Educational Spaces within the facility, a description of the number and sizes (in square feet) of classrooms, a description of science rooms/labs including ages and most recent updates, and a description of the media center/library (maximum of 5000 characters).

From HMFH report:

Over the years, spaces have been repurposed, re-invented, re-configured, expanded, and divided. Every school year walls are added and taken down; what may have been a right-size classroom one year then becomes two undersized classrooms the next school year. The MSBA guidelines provide for general classrooms sized between 825-950 square feet. Of all the general classrooms in the high school, only 23% meet the minimum of this guideline. Further, the majority of the specialty classrooms do not meet the guidelines. Science rooms are greatly undersized; the average room is 1,000 square feet; per the guidelines the rooms should be 1,440 square feet and this is with an assumed maximum enrollment of 23 students per class; 40% of science classes exceed 23 students, with many classes in the range of 28-30. In the case of the Science program, the undersized rooms are more than crowded, they are unsafe. Science lab experiments require space and free circulation to ensure safe procedures; the high school labs do not have enough space to provide this. The only way to alleviate the overcrowding within the current science classrooms is to provide additional classrooms.

In addition to the undersized spaces causing overcrowding difficulties, there are many classrooms with physical obstructions that hinder the ability of the teachers to teach and the students to learn. There are large columns in six classrooms, another four classrooms have been divided (out of necessity) into irregular shapes, meaning that students cannot see the front marker board and the teacher cannot see some students. A classroom was divided into two, but it is not acoustically separated, making teaching and learning difficult in the two areas. These conditions inhibit different modes of teaching and learning.

The obstructed and irregular shaped rooms make up 20% of the teaching spaces. For a diagram showing these spaces, see Appendix C in the Analysis of Programmatic Needs.

The high school is already experiencing overcrowding in the classrooms and with the High School enrollment projected to increase by an estimated 121 students within five years and by an estimated 406 students by 2024, any renovation must develop more usable classroom space.

Beyond the sizes and configurations of the educational spaces there are environmental issues that make the spaces both uncomfortable and distracting to teach and learn in, such as indoor air quality, temperature extremes and lack of control, and problematic incidences with mice and wasps.

There are many features that are necessary to support high school education, many of which did not exist when the school (and its additions) was constructed. Accessing today's technology is essential for teachers and students. The following are a number of the key education-related and learning-environment related features today's high school requires:

- Ceiling-mounted projectors: the columns in some classrooms do more than disrupt sightlines; they hinder the ability to utilize this essential teaching tool. In addition some ceilings are designed in such a manner that it is not feasible to mount a projector or wire the classroom appropriately for such devices.
- Wireless access: the physical construction of the buildings hinders wireless access and requires a more costly solution to achieve ("block walls, block signals").
- Telephones: for security, telephones are required in every teaching space.
- PA system: the current system is outdated, does not access all of the building, creating a safety risk, and is extremely jarring to the occupants.
- Simulcast ability: the ability to broadcast to multiple areas of the building creates wide-reaching opportunities for learning.
- Sinks and eyewash/ shower stations: a sufficient quantity of sinks, appropriately located, is required for sanitary, safety, and project-based learning; operating eyewash/ shower stations are required at all Science classrooms.
- Flexible, movable furnishings: Science classroom furniture is bolted to the floors creating a rigid and often inappropriate

classroom layout.

- Audio/Video space: access to learning and using today's current technologies is essential for the high school student.
- Electrical outlets: an increased access to electrical power is necessary; currently many extension cords and power strips are being used creating unsafe conditions leading to shortages in the system.

For more, please see the Analysis of Programmatic Needs attached.

CAPACITY and UTILIZATION: Please provide a detailed description of the current capacity and utilization of the school facility. If the school is overcrowded, please describe steps taken by the administration to address capacity issues. Please also describe in detail any spaces that have been converted from their intended use to be used as classroom space (maximum of 5000 characters).

Currently the high school houses an enrollment of 1254, which is expect to reach 1660 by 2024. Classrooms in each department are utilized throughout the day in order to provide additional sections to help reduce class size. Additional teachers hired to address large class sizes present room scheduling challenges for administration. To create more classroom space, some classrooms have been divided in half, but the resulting rooms can feel very cramped. For example, in the World Languages department one divided classroom of approximately 400 square feet currently has classes of 25 using the space.

From HMFH report:

Adjacency requirements between program spaces and services are often not met, due in part to the generous size and spread-out nature of the facility and also due to not having adequate room in a designated area of the building to accommodate the full program. In most cases the locations of the various departments are quite removed from one another and therefore it "does not encourage collaboration and support." Additionally, there are minimal spaces that allow for teachers (of similar and dissimilar subjects) to meet and collaborate. Even though the intent is for like programs to be grouped together, in several instances, and because of required growth of either or both the program's needs or enrollment, this has not been possible. The Music program is on three different levels, making collaboration and circulation difficult; students travel up and down stairs with their instruments, and stage sets are made in a distant space, un-assembled and then are hauled to the Stage in pieces to be reassembled. The Family and Consumer Sciences program is also spread out on several levels and, ideally, the program would be adjacent to both the childcare space and the Pre-School program, but with the school's current configuration this is not possible.

In thinking about adjacency needs, we need to also address the needs of differentiated instruction (team teaching, project-based learning, one-on-one instruction, and individual learners). Differentiated instruction requires spaces of varied size as well as adjacencies to the corresponding program. Small-group rooms and break-out spaces allow for differentiated instruction; currently Arlington does not have purposeful smaller teaching spaces to promote flexibility in teaching and learning. As well as the limited large and small group spaces for classrooms, there is also a deficit of spaces for support services such as guidance and special education.

Support services, such as toilet facilities, shared storage rooms and faculty workrooms are few and far between, which has a significant impact in a building of this size. Per the Massachusetts Plumbing Code, the current number of occupants at the high school would require the following toilet facilities, properly distributed per floor: male students = seven toilets plus seven urinals; female students = 20 toilets; adult males = four toilets, adult females = five toilets. Separate toilet facilities are required at the Auditorium equal to five toilets plus five urinals for males and 15 toilets for females. Similarly, separate facilities are required at the Gymnasium equal to seven toilets plus seven urinals for males and 20 toilets for females. Therefore, per the Code, the total fixture count would be: 23 male toilets, 19 male urinals, and 60 female toilets. (This calculation does not include the facilities that are also required at the Nurse, Administration, Pre-School, and Daycare areas.) Currently there are 18 male toilets, 26 male urinals, and 22 female toilets. Based on the current school population, the facility is greatly deficient and this does not include the anticipated increase in enrollment.

Additionally, student services such as guidance, social work, METCO program, and administrative oversight, would benefit from an analysis identifying their best locations. In some instances they need to be readily accessible throughout the building while in others, for privacy and comfort, need to be a bit more tucked away.

The location of spaces is not so easily solvable as to just relocate programs; each program has specific spatial requirements (size, features, etc.), and as it is, many of the current spaces are used for multiple programs and do not provide the necessary features, and therefore the whole of the programmatic needs will need to be assessed and addressed in the future Feasibility Study.

MAINTENANCE and CAPITAL REPAIR: Please provide a detailed description of the district's current maintenance practices, its capital repair program, and the maintenance program in place at the facility that is the subject of this SOI. Please include specific examples of capital repair projects undertaken in the past, including any override or debt exclusion votes that were necessary (maximum of 5000 characters).

The Maintenance Department consists of a Supervisor, three carpenters, two electricians, one plumber, and two construction/handymen. Job requests are submitted and managed via an electronic help desk. This Maintenance Department is responsible for both the Town and the School District.

Capital requests come from facilities studies, Department Directors and the Superintendent of Building Maintenance. Projects include roofs, boilers, flooring, doors, construction infrastructure projects, security upgrades, heating and ventilating equipment replacement, etc.

The School Maintenance Department has preventative maintenance (PM) programs in place for boilers, ventilation systems, fire alarms, fire sprinklers, elevators and roofs.

The Town Manager is responsible for submitting a five-year capital plan to the Selectmen each year, with input from the schools and other departments. The goal of the Capital Planning Committee is to provide a means of planning for the maintenance and/or improvement of the capital assets and infrastructure of the Town.

Priority 3

Question 1: Please provide a detailed description of the "facility-related" issues that are threatening accreditation. Please include in this description details related to the program or facility resources (i.e. Media Center/Library, Science Rooms/Labs, general classroom space, etc.) whose condition or state directly threatens the facility's accreditation status.

From the NEASC Report:

The school building shows significant signs of wear and a general need for greater maintenance of essential facilities. Bathrooms have a general lack of cleanliness and do not all have functioning soap dispensers, working faucets, and stalls. Many lockers are rusted and broken and locker rooms have peeling paint. There is one classroom that is closed to students due to environmental concerns. During the visit ceiling tiles were seen falling in the building. Funding for repairs is limited to critical incidents, with additional projects being addressed through budget savings in other areas. Some hallways and many classrooms are dusty and vents in many areas have visible signs of dust and lint in them. Basic classroom equipment such as faucets, desks, tables, and lab supplies are worn, broken, or not up to current standards of use. The Technology Plan does not show a cycle for replacement of equipment in order to maintain an adequate level of service. Acceptable levels of cleanliness and repair must be provided to ensure that the building allows students to meet the learning expectations.

Arlington High School is a complex of three buildings. The space for programs and services is crowded and show signs of age, wear, and inadequate maintenance. There is insufficient classroom and lab space to support the curriculum. Quality instruction is being delivered by teachers in spite of the impediments of a crowded and deteriorating building. Although students and teachers have pride in the programs at AHS, the advanced age of the building shows significant signs of wear and tear. Science labs are not sufficient in size or design for some classes that have larger enrollments. Columns and posts in rooms obstruct student vision and movement. Media center renovations have created a space for student collaboration and the use of technology and the facility is used extensively before, during and after school. The school has significant gym and workout space with a variety of programs available. Classrooms are insufficient in number and size especially in science and art classrooms, where class size exceeds the number of available stations in some classrooms. Students are able to achieve educational goals and objectives in spite of a facility with significant needs.

Deficiencies in science laboratory safety, handicap entrance and egress, and fire drill procedures exist as a part of the physical plant. Science laboratories either have no or limited access to eyewash stations/ showers or eyewash stations/ showers that have no documentation of inspection. Gas shutoffs are not located within each room and safety equipment such as fire blankets is missing. Handicap entrance and egress is inadequate for the building, and facilities such as the auditorium and "the pit" are not up to current ADA requirements.

From the HMFH report:

We have identified existing space deficits, including size, quantity, configuration, obstructions, technology and other necessary features, and location within the school building. What has not been identified are the additional educational spaces required to continue to allow Arlington High School to achieve excellent academic results:

- 1 Science requires: additional classrooms and specifically Biology classrooms
- 1 A flexible modern library "learning commons" to serve as central meeting, collaboration, study, support, and presentation space.
- 1 Culinary Arts requires: additional instruction space and lab space, and increased size to the current Family and Consumer Science (FACS) rooms
- 1 Special Education requires: Occupational Therapy, Physical Therapy, and Speech & Language dedicated spaces and more secure counseling spaces
- 1 Music requires: a dedicated Instrumental Music classroom adjacent to the rest of the music program, Auditorium/Stage need wing space, fly space, and orchestra pit, and scene shop adjacency
- 1 Visual Arts: a dedicated studio arts space

- | Physical Education requires: Health classroom and Dance studio (and desires a Swimming Pool for both the athletics department and for wider community use)
- | School-wide: meeting rooms, collaboration spaces, and small group rooms, there are no meeting spaces that can comfortably accommodate the faculty or large groups of students for collaborative work; an outdoor classroom
- | An adequate Cafeteria that is easily able to be supervised and will accommodate the increased enrollment

Priority 3***Question 2: Please describe the measures the district has taken to mitigate the problem(s) described above.***

Since the time of this report, we have been able to fill the Day Custodial Supervisor position (which at the time of the NEASC visit had been vacant for five months) and we have added a Night Custodial Supervisor position as well. The strengthening of oversight in the custodial area has made tremendous improvements to the cleanliness of the High School, and in fact raised the bar on the cleanliness of the district as a whole.

Additionally, School Administration and School Committee have been working with Town officials and volunteers through the Capital Planning Committee, the Long Range Planning Committee, the Finance Committee and other groups to raise awareness of the need for radical improvement to the High School facility. A capital needs assessment was commissioned and completed by On-site Insight to evaluate the purely physical needs of the High School complex. HMFH was also engaged to work with the High School faculty to develop a concise statement of programmatic needs. It was widely felt that both of these reports would aid the School Department in gaining community awareness and support for a much needed project, in advance of a formal application to the MSBA.

Priority 3

Question 3: Please provide a detailed explanation of the impact of the problem described in this priority on your district's educational program. Please include specific examples of how the problem prevents the district from delivering the educational program it is required to deliver and how students and/or teachers are directly affected by the problem(s) identified.

From NEASC Report:

The size and number of classrooms is insufficient. The condition of the facilities limits the staff's ability to implement the curriculum. Columns and posts in rooms obstruct student vision and movement. Science labs are not sufficient in size or design for some classes that have larger enrollments. Deficiencies in science laboratory safety and handicap entrance and egress exist in the facility. Science laboratories either have no or limited access to eyewash stations/showers or eyewash stations/showers that have no documentation of current inspection. Gas shutoffs are not located within each room and safety equipment such as fire blankets is missing. Handicap entrance and egress is inadequate for the building, and facilities such as the auditorium and "the pit" are not up to current ADA requirements.

From HMFH Report:

The school programs are currently arranged departmentally and, due to the overall size of the facility, some of the programs are at a great distance from one another, creating silos and inhibiting communication and collaboration between the educators. (For a diagram of the program layout, see Appendix C.) Teaching and learning have changed significantly in the past two decades, let alone the last ten decades, collaboration is essential today. Teachers need to be able to meet to discuss interdisciplinary teaching plans and the students in their charge.

Over the years, spaces have been repurposed, re-invented, re-configured, expanded, and divided. Every school year walls are added and taken down; what may have been a right-size classroom one year then becomes two undersized classrooms the next school year. The MSBA guidelines provide for general classrooms sized between 825-950 square feet. Of all the general classrooms in the high school, only 23% meet the minimum of this guideline. Further, the majority of the specialty classrooms do not meet the guidelines. Science rooms are greatly undersized; the average room is 1,000 square feet; per the guidelines the rooms should be 1,440 square feet and this is with an assumed maximum enrollment of 23 students per class; 40% of science classes exceed 23 students, with many classes in the range of 28-30. In the case of the Science program, the undersized rooms are more than crowded, they are unsafe. Science lab experiments require space and free circulation to ensure safe procedures; the high school labs do not have enough space to provide this. The only way to alleviate the overcrowding within the current science classrooms is to provide additional classrooms.

In addition to the undersized spaces causing overcrowding difficulties, there are many classrooms with physical obstructions that hinder the ability of the teachers to teach and the students to learn. There are large columns in six classrooms, another four classrooms have been divided (out of necessity) into irregular shapes, meaning that students cannot see the front marker board and the teacher cannot see some students. A classroom was divided into two, but it is not acoustically separated, making teaching and learning difficult in the two areas. These conditions inhibit different modes of teaching and learning.

There are many features that are necessary to support high school education, many of which did not exist when the school (and its additions) was constructed. Accessing today's technology is essential for teachers and students. The following are a number of the key education-related and learning-environment related features today's high school requires:

- 1 Ceiling-mounted projectors: the columns in some classrooms do more than disrupt sightlines; they hinder the ability to utilize this essential teaching tool. In addition some ceilings are designed in such a manner that it is not feasible to mount a projector or wire the classroom appropriately for such devices.
- 1 Wireless access: the physical construction of the buildings hinders wireless access and requires a more costly solution to achieve ("block walls, block signals").
- 1 Simulcast ability: the ability to broadcast to multiple areas of the building creates wide-reaching opportunities for learning.

- 1 Audio/Video space: access to learning and using today's current technologies is essential for the high school student.
- 1 Electrical outlets: an increased access to electrical power is necessary; currently many extension cords and power strips are being used creating unsafe conditions leading to shortages in the system.

Please consult the full attached reports for greater detail which support the NEASC Recommendations, which include:

- 1 Develop and implement a long-range plan, with a timeline for completion and a source of funding, to completely address school facility needs.
- 1 Address overcrowding in classroom settings in which the use of lab and studio equipment presents potential safety hazards.
- 1 Address all health and safety issues including science labs, egress plans for evacuation, and handicap accessibility.

Please also provide the following:

Name of accrediting entity (maximum of 100 characters)::

NEW ENGLAND ASSOCIATION OF SCHOOLS & COLLEGES, INC. COMMISSION ON PUBLIC SCHOOLS (NEASC)

Current Accreditation Status: Please provide appropriate number as 1=Passed, 2=Probation, 3=Warning, 4=Lost:

3

If "WARNING", indicate the date accreditation may be switched to Probation or lost:: 10/1/2014

If "PROBATION", indicate the date accreditation may be lost::

Please provide the date of the first accreditation visit that resulted in your current accreditation status.:

4/7/2013

Please provide the date of the follow-up accreditation visit:: 10/1/2014

Are facility-related issues related to Media Center/Library? If yes, please describe in detail in Question 1 below.:

YES

Are facility-related issues related to Science Rooms/Labs? If yes, please describe in detail in Question 1 below.:

YES

Are facility-related issues related to general classroom spaces? If yes, please describe in detail in Question 1 below.: YES

Are facility-related issues related to SPED? If yes, please describe in detail in Question 1 below: YES

Are facility-related issues related to support spaces? If yes, please describe in detail in Question 1 below.:

YES

Are facility-related issues related to "Other"? If yes, please identify the other area below and describe in detail in Question 1 below.: NO

Please describe (maximum of 100 characters).:

Priority 4***Question 1: Please describe the conditions within the community and School District that are expected to result in increased enrollment.***

Based on a five year weighted average to measure continuity rates from grade to grade, the Arlington Public Schools are anticipating significant space pressure at both the Middle and the High School buildings. Since 2000 the district has grown 24%, from 4165 to 5157 students. Much of this growth has been concentrated at the elementary level. As we project forward in time, using our current continuity rates, we can see that our High School enrollment of 1254 is projected to rise to 1375 in five years and 1660 in ten years. At the same time, our enrollment at the Ottoson Middle School is projected to rise from our current level of 1078 (slightly above the design capacity of 1050), to 1305 in five years and 1378 in ten years.

The document below has visible grid lines in the application system that do not appear in print. For easier viewing, please see the attached Enrollment Projection spreadsheet.

Year	Births 5- yrs prev	Pre-K	K	1	2	3	4	5	6	7	8	MS Tot	9	10	11	12	HS Tot	HS Incr/ (Decr) from Prior yr.	% Change
2006-2007	545	84	442	391	386	394	385	357	356	339	347	1042	302	309	301	323	1235		
2007-2008	537	79	409	439	399	384	381	382	337	354	317	1008	316	271	299	292	1178-57		-4.8%
2008-2009	496	82	456	405	439	387	376	374	369	344	354	1067	296	308	266	300	1170-8		-0.7%
2009-2010	558	64	457	451	411	423	387	366	365	373	343	1081	320	295	323	272	121040		3.3%
2010-2011	545	60	450	442	435	399	427	367	349	350	365	1064	306	325	296	311	123828		2.3%
2011-2012	537	47	434	455	421	426	390	412	355	335	348	1038	308	304	342	299	125315		1.2%
2012-2013	496	57	453	472	446	420	429	395	379	337	337	1053	322	313	309	354	129845		3.5%
2013-2014	558	60	477	478	483	464	434	429	357	393	328	1078	299	320	321	314	1254-44		-3.5%
5 Year Continuity Rate	1	0.855 (PK)	1.039 (K)	0.989 (K-1)	1.002 (1-2)	1.010 (2-3)	0.988 (3-4)	0.932 (4-5)	0.986 (5-6)	0.988 (6-7)		0.890 (8-9)	1.003 (9-10)	1.027 (10-11)	1.013 (11-12)				
Proj by Births 2014-2015	517	60	442	496	473	484	469	429	400	352	388	1140	292	300	329	325	1246-8		-0.7%
2015-2016	563	60	481	459	490	474	489	463	400	394	348	1142	346	293	308	333	128034		2.7%
2016-2017	545	60	466	500	454	491	479	483	431	394	390	1215	310	347	301	312	1270-10		-0.8%
2017-2018	597	60	510	484	495	455	496	473	450	425	390	1265	347	311	356	305	131949		3.7%
2018-2019** Proj beyond births	525	60	449	530	479	496	460	490	441	444	420	1305	347	348	319	361	137556		4.1%
2019-2020	0	0	0	466	524	480	501	454	457	435	439	1330	374	348	358	323	140328		2.0%
2020-2021	0	0	0	0	461	526	485	494	423	450	430	1303	391	375	385	352	1503100		6.7%
2021-2022	0	0	0	0	462	531	479	461	417	445		1324	430	392	386	390	159793		5.9%
2022-2023	0	0	0	0	0	467	524	446	454	413		1313	397	431	402	391	162024		1.5%
2023-2024	0	0	0	0	0	0	461	489	440	449		1378	413	398	442	408	166040		2.4%
2024-2025	0	0	0	0	0	0	0	430	482	435		1347	400	414	424	403	1640-20		-1.2%
2025-2026	0	0	0	0	0	0	0	0	0	424	476	900	387	401	411	419	1619-22		-1.4%
2026-2027	0	0	0	0	0	0	0	0	0	0	419	419	424	388	398	407	1617-2		-0.1%
2027-2028	0	0	0	0	0	0	0	0	0	0	0	0	373	425	436	394	162811		0.7%

Data from
PowerSchool as of 11/4/13

**Birth
Numbers from Arlington Town Clerk, estimated for 2018-2019

Priority 4

Question 2: Please describe the measures the School District has taken or is planning to take in the immediate future to mitigate the problem(s) described above.

Beginning at the preschool level, Arlington has been experiencing a steadily increasing enrollment since 2000. During the reconstruction of the Thompson Elementary School, efforts were made to design a suitable early childhood space as part of that project. Unfortunately, size constraints of the site and available funding from the Town made this impossible. The preschool is currently housed in our High School, which is not well designed to accommodate a preschool's needs, nor does it provide the needed additional space as the program expands.

At the elementary level, our newest school was built with a larger capacity to help absorb the influx of new elementary students. Arlington has redistricted its elementary schools and instituted buffer zones between the neighborhood school districts. This redistricting helped to shift the student population away from densely populated schools and redistribute it more evenly. The creation of buffer zones allows the district administration to have some ongoing flexibility in the allocation of students as we move into the future.

As this much larger elementary population ages up through our district, we expect to see overcrowding at both the middle and the high school. Of the two buildings, the high school is in much greater need of a thorough renovation and reconstruction. It is also situated on a larger parcel of land. One possible solution to enrollment pressure in both places would be to create an eighth grade academy within a reconstructed high school. By moving the eighth grade class out of the middle school, we would reduce the enrollment to slightly below the middle school's design capacity for the foreseeable future without the need for further expansion on a very space limited site. Another option for reducing enrollment pressure at the middle school might include temporary classrooms until additional classrooms can be built later, if necessary. Please see the attached enrollment projection sheet for further details.

Priority 4

Question 3: Please provide a detailed explanation of the impact of the problem described in this priority on your district's educational program. Please include specific examples of how the problem prevents the district from delivering the educational program it is required to deliver and how students and/or teachers are directly affected by the problem identified.

From the HMFH report:

Arlington High School was constructed for a different time in education than what is expected today, let alone what will be required into the foreseeable future. 21st century schools are all about technology, interconnectedness, collaboration, interaction, hands-on learning and making, experiences, teamwork, and interpersonal skills. The excellent teaching staff at the high school knows this and accomplishes much within the constraints of the antiquated facility. It is time to look to the future and to make every effort to create an environment that supports the dynamic teaching at Arlington High School.

School buildings need clear way-finding and be navigable by all, student and visitor alike. Schools need to have spaces in a variety of sizes that are adjacent to one another to provide appropriate space for differentiated learning styles. The spaces need to be flexible in terms of variety of sizes, and a level of consistency among the amenities. The teaching spaces need to be supported by today's teaching tools, such as ceiling projectors, wireless, and the like. Schools must achieve these goals in an environment that is at the same time, inviting, open, secure, and supervised. When thinking of any building today, but perhaps most especially buildings used for educating students, we need to be planning sustainably, using our existing resources wisely, and thinking even further into the future about what else may need to be accommodated on the high school site. Designing sustainably means with the outdoor, as well as the indoor, environment in mind, while creating a long-lasting, low-maintenance, well-planned facility to accommodate flexibility and growth.

Schools need to be safe and secure havens for all that enter. Simple things like signage, color, exposure to natural light, connection through views to nature and the surroundings, combine to create a secure, understandable environment in which today's and tomorrow's student learn and grow. These are possible to achieve within a thorough, thoughtful renovation, but they need to be planned for and supported by the community's resources in order for the high school to best support the youth of Arlington into the coming decades.

Please also provide the following:

Cafeteria Seating Capacity:	450
Number of lunch seatings per day:	3
Are modular units currently present on-site and being used for classroom space?:	NO

If "YES", indicate the number of years that the modular units have been in use:

Number of Modular Units:

Classroom count in Modular Units:

Seating Capacity of Modular classrooms:

What was the original anticipated useful life in years of the modular units when they were installed?:

Have non-traditional classroom spaces been converted to be used for classroom space?:	NO
--	----

If "YES", indicate the number of non-traditional classroom spaces in use:

Please provide a description of each non-traditional classroom space, its originally-intended use and how it is currently used (maximum of 1000 characters):

Please explain any recent changes to the district's educational program, school assignment policies, grade configurations, class size policy, school closures, changes in administrative space, or any other changes that impact the district's enrollment capacity (maximum of 5000 characters). :

At the elementary level, our newest school was built with a larger capacity to help absorb the influx of new elementary students. Arlington has redistricted its elementary schools and instituted buffer zones between the neighborhood school districts. This redistricting helped to shift the student population away from densely populated schools and redistribute them more evenly. The creation of buffer zones allows the district administration to have some ongoing flexibility in the allocation of students as we move into the future.

What are the district's current class size policies (maximum of 500 characters)?:

There is no specific policy regarding class size, although efforts are made to have elementary classes of 24 or less and secondary classes of 26 or less.

Priority 5

Question 1: Please provide a detailed description of the issues surrounding the school facility systems (e.g., roof, windows, boilers, HVAC system, and/or electrical service and distribution system) that you are indicating require repair or replacement. Please describe all deficiencies to all systems in sufficient detail to explain the problem.

Please see the attached On-site Insight report, section 2 (page 8-29) and section 3 (page 40-56) for a report of the existing deficiencies in the high school facility systems.

Of particular note is the Executive Summary Dashboard on page 5, which shows that the vast majority of needed improvements are so urgent that they must be scheduled in the first year of the plan.

Unfortunately, it is impossible to insert these pages into this online application system, due to limitations of formatting.

Priority 5

Question 2: Please describe the measures the district has already taken to mitigate the problem/issues described in Question 1 above.

Ongoing emergency repairs are made to protect health and safety. Beyond that, systems have been replaced or upgraded as they fail. In 2013, a significant renovation of the HVAC system was made to the administrative offices on the 6th floor to reduce energy consumption, stabilize heating and cooling, and improve the circulation of fresh air. Two boilers of six have been replaced in the past four years, as their predecessors were failing.

Priority 5

Question 3: Please provide a detailed explanation of the impact of the problem/issues described in Question 1 above on your district's educational program. Please include specific examples of how the problem prevents the district from delivering the educational program it is required to deliver and how students and/or teachers are directly affected by the problem identified.

From the HMFH report:

It is clear that due to its age, the complex requires significant upgrades to (or replacement of) all of the building systems and finishes. This is because either they are obsolete, not in working order, and a drain on energy and maintenance resources, or because they simply do not comply with current code standards for accessibility, plumbing fixture quantities, structural implications, or hazardous material abatement.

Beyond the sizes and configurations of the educational spaces there are environmental issues that make the spaces both uncomfortable and distracting to teach and learn in, such as indoor air quality, temperature extremes and lack of control, and problematic incidences with mice and wasps.

- ┆ Acoustic needs: many spaces are acoustically challenged, causing disruptions and making learning difficult; the Music program spaces do not have appropriate acoustic treatment; the rooms adjacent to the Cafeteria are interrupted by noise; the Language Lab needs appropriate acoustics. Old Hall is a loud, echo-filled, challenging space to occupy, coupled with the noises clearly heard from the space below used for band practice and wrestling practice.
- ┆ Auditorium sound and lighting systems: the systems are aged and require replacement.
- ┆ Equipment: throughout the various program spaces much of the equipment used by the teaching staff is outdated or does not exist (fume hoods, appliances, etc.)
- ┆ Air conditioning: the school is used year-round and air conditioning is essential and, at minimum, the Library, Auditorium, and Administrative areas should have air conditioning.
- ┆ Borrowed lights and glazing: part of the confusion of the complex is due to the lack of visual connection between spaces.

In addition to there being too few toilet rooms with too few fixtures for the population, the majority of them are located at the very end of hallways, sometimes beyond the paired hall doors and within the stair well. These are not regularly supervised and pose numerous threats and at the very least, maximize insecurities. We understand that due to the physical, deteriorating conditions as well as the isolated locations of the toilet facilities, that there are students who will not use the facilities throughout the entire school day. This is not a healthy situation.

Many classrooms teachers have resorted to the use of power extension cords that, by their nature, are strung across the floors. The result is that teachers do not use technology as readily and tripping is a hazard to students and equipment.

Priority 5

Question 4: Please describe how addressing the school facility systems you identified in Question 1 above will extend the useful life of the facility that is the subject of this SOI and how it will improve your district's educational program.

The improvements suggested in the On-Site Insight report will replace those elements of the physical plant that are beyond their useful life, and will allow the building to function appropriately. These improvements will not greatly help the many academic issues in the building, such as outdated science labs, poorly configured classrooms, lack of breakout space, etc, as outline in the Analysis of Programmatic Needs, nor would they address future enrollment pressures.

Please also provide the following:

Have the systems identified above been examined by an engineer or other trained building professional?:

YES

If "YES", please provide the name of the individual and his/her professional affiliation (maximum of 250 characters)::

Mr.Robert Labadini is a Building Performance Institute (BPI)-certified energy auditor, and LEED Green Associate accredited.

The date of the inspection:: 4/16/2013

A summary of the findings (maximum of 5000 characters)::

Please see the attached On-site Insight Green Capital Needs Assessment and Reserve Replacement Analysis report attached.

Priority 7

Question 1: Please provide a detailed description of the programs not currently available due to facility constraints, the state or local requirement for such programs, and the facility limitations precluding the programs from being offered.

With the advent of the Common Core and the PARCC assessments scheduled to replace MCAS, access to the benefits of a modern facility become more urgently needed. The limitations of our facility force us to limit what experiments we can run in science class, what access students have to develop their skills in art, instrumental music and consumer science and how much collaboration for students or teachers is possible. Small group work is virtually impossible in an undersized or miss-shaped classroom. Vitally important is access to modern technology, both for testing and for college and career readiness. The current high school's limitations made the roll out of better technology challenging at a number of levels.

From HMFH Analysis of Programmatic Needs:

There are many features that are necessary to support high school education, many of which did not exist when the school (and its additions) was constructed. Accessing today's technology is essential for teachers and students. The following are a number of the key education-related and learning-environment related features today's high school requires:

- 1 Ceiling-mounted projectors: the columns in some classrooms do more than disrupt sightlines; they hinder the ability to utilize this essential teaching tool. In addition, some ceilings are designed in such a manner that it is not feasible to mount a projector or wire the classroom appropriately for such devices.
- 1 Wireless access: the physical construction of the buildings hinders wireless access and requires a more costly solution to achieve ("block walls, block signals").
- 1 Telephones: for security, telephones are required in every teaching space.
- 1 PA system: the current system is outdated, does not access all of the building, creating a safety risk, and is extremely jarring to the occupants.
- 1 Simulcast ability: the ability to broadcast to multiple areas of the building creates wide-reaching opportunities for learning.
- 1 Sinks and eyewash/ shower stations: a sufficient quantity of sinks, appropriately located, is required for sanitary, safety, and project-based learning; operating eyewash/ shower stations are required at all Science classrooms.
- 1 Flexible, movable furnishings: Science classroom furniture is bolted to the floors creating a rigid and often inappropriate classroom layout.
- 1 Audio/Video space: access to learning and using today's current technologies is essential for the high school student.
- 1 Electrical outlets: an increased access to electrical power is necessary; currently many extension cords and power strips are being used creating unsafe conditions leading to shortages in the system.
- 1 Acoustic needs: many spaces are acoustically challenged, causing disruptions and making learning difficult; the Music program spaces do not have appropriate acoustic treatment; the rooms adjacent to the Cafeteria are interrupted by noise; the Language Lab needs appropriate acoustics. Old Hall is a loud, echo-filled, challenging space to occupy, coupled with the noises clearly heard from the space below used for band practice and wrestling practice.
- 1 Auditorium sound and lighting systems: the systems are aged and require replacement.
- 1 Equipment: throughout the various program spaces much of the equipment used by the teaching staff is outdated or does not exist (fume hoods, appliances, etc.)

- ┆ Air conditioning: the school is used year-round and air conditioning is essential and, at minimum, the Library, Auditorium, and Administrative areas should have air conditioning.
- ┆ Borrowed lights and glazing: part of the confusion of the complex is due to the lack of visual connection between spaces.

Priority 7

Question 2: Please describe the measures the district has taken or is planning to take in the immediate future to mitigate the problem(s) described above.

The District has focused on gathering detailed information from outside evaluators and community members so that it can deeply understand the current state of the building, the particular improvements required and the time frame in which they are needed, as well as the programmatic impacts and limitations of the current high school building. The relevant reports are attached to this SOI and are referred to at length in this document. Key information was gathered during the most recent accreditation process, which highlighted in particular the detrimental nature of aspects of the facility. Accordingly, HMFH was retained to do a follow-on programmatic study. In addition, the District retained On-Site Insight for a Green Capital Needs Assessment and Replacement Reserve Analysis.

In addition, the District has created a building committee made up of both professional staff, local government representatives and community volunteers, including parents. To further ensure full understanding of the current building and cost effective paths to improvement, the District has reached out to many community partners. Arlington has strong volunteer participation in local government, allowing a depth of outreach not always easily achieved in other communities. To date, the District has sought input from the Town's Capital Planning Committee, Finance Committee, Permanent Town Building Committee, and Long Range Planning Committee.

Priority 7

Question 3: Please provide a detailed explanation of the impact of the problem described in this priority on your district's educational program. Please include specific examples of how the problem prevents the district from delivering the educational program it is required to deliver and how students and/or teachers are directly affected by the problem identified.

From HMFH Report:

The size of the school is generous and therefore has provided opportunities over the years to be useful to meet town space needs, but its size is one of the factors that cause it to be confusing. Furthering the sense of confusion is the configuration; due to the many additions over the years, there are several continuous loop corridors on multiple levels and some portions of the school are one, four, and five levels high. Additionally, there are two floor levels that are half underground, located along the full length of the Massachusetts Avenue façade; this lack of day-light adds to the disorientation.

Adjacency requirements between program spaces and services are often not met, due in part to the generous size and spread-out nature of the facility and also due to not having adequate room in a designated area of the building to accommodate the full program. In most cases the locations of the various departments are quite removed from one another and therefore it “does not encourage collaboration and support.” Additionally, there are minimal spaces that allow for teachers (of similar and dissimilar subjects) to meet and collaborate. Even though the intent is for like programs to be grouped together, in several instances, and because of required growth of either or both the program’s needs or enrollment, this has not been possible. The Music program is on three different levels, making collaboration and circulation difficult; students travel up and down stairs with their instruments, and stage sets are made in a distant space, un-assembled and then are hauled to the Stage in pieces to be reassembled. The Family and Consumer Sciences program is also spread out on several levels and, ideally, the program would be adjacent to both the childcare space and the Pre-School program, but with the school’s current configuration this is not possible.

In thinking about adjacency needs, we need to also address the needs of differentiated instruction (team teaching, project-based learning, one-on-one instruction, and individual learners). Differentiated instruction requires spaces of varied size as well as adjacencies to the corresponding program. Small-group rooms and break-out spaces allow for differentiated instruction; currently Arlington does not have purposeful smaller teaching spaces to promote flexibility in teaching and learning. As well as the limited large and small group spaces for classrooms, there is also a deficit of spaces for support services such as guidance and special education.

Additionally, student services such as guidance, social work, METCO, and administrative oversight, would benefit from an analysis identifying their best locations. In some instances they need to be readily accessible throughout the building while in others, for privacy and comfort, need to be a bit more tucked away.

The location of spaces is not so easily solvable as to just relocate programs; each program has specific spatial requirements (size, features, etc.), and as it is, many of the current spaces are used for multiple programs and do not provide the necessary features, and therefore the whole of the programmatic needs will need to be assessed and addressed in the future Feasibility Study.

Following are the presently known missing and/or inadequate educational spaces, the Feasibility Study process will result in a comprehensive understanding of the needs.

- 1 Science requires: additional classrooms and specifically Biology classrooms
- 1 A flexible modern library “learning commons” to serve as central meeting, collaboration, study, support, and presentation space. The
- 1 Culinary Arts requires: additional instruction space and lab space, and increased size to the current Family and Consumer Science (FACS) rooms
- 1 Special Education requires: Occupational Therapy, Physical Therapy, and Speech & Language dedicated spaces and

more secure counseling spaces

- | Music requires: a dedicated Instrumental Music classroom adjacent to the rest of the music program, Auditorium/Stage need wing space, fly space, and orchestra pit, and scene shop adjacency
- | Visual Arts: a dedicated studio arts space
- | Physical Education requires: Health classroom and Dance studio (and desires a Swimming Pool for both the athletics department and for wider community use)
- | School-wide: meeting rooms, collaboration spaces, and small group rooms, there are no meeting spaces that can comfortably accommodate the faculty or large groups of students for collaborative work; an outdoor classroom

REQUIRED FORM OF VOTE TO SUBMIT AN SOI

REQUIRED VOTES

If a City or Town, a vote in the following form is required from both the City Council/Board of Aldermen **OR** the Board of Selectmen/equivalent governing body **AND** the School Committee.

If a regional school district, a vote in the following form is required from the Regional School Committee only. FORM OF VOTE Please use the text below to prepare your City's, Town's or District's required vote(s).

FORM OF VOTE

Please use the text below to prepare your City's, Town's or District's required vote(s).

Resolved: Having convened in an open meeting on _____, prior to the closing date, the

_____ [City Council/Board of Aldermen,

Board of Selectmen/Equivalent Governing Body/School Committee] of _____ [City/Town], in

accordance with its charter, by-laws, and ordinances, has voted to authorize the Superintendent to submit to the Massachusetts School Building Authority the Statement of Interest dated _____ for the

_____ [Name of School] located at

_____ [Address] which

describes and explains the following deficiencies and the priority category(s) for which an application may be submitted to the Massachusetts School Building Authority in the future

_____ ; [Insert a description of the priority(s) checked off

on the Statement of Interest Form and a brief description of the deficiency described therein for each priority]; and hereby further

specifically acknowledges that by submitting this Statement of Interest Form, the Massachusetts School Building Authority in no way guarantees the acceptance or the approval of an application, the awarding of a grant or any other funding commitment from the Massachusetts School Building Authority, or commits the City/Town/Regional School District to filing an application for funding with the Massachusetts School Building Authority.

CERTIFICATIONS

The undersigned hereby certifies that, to the best of his/her knowledge, information and belief, the statements and information contained in this statement of Interest and attached hereto are true and accurate and that this Statement of Interest has been prepared under the direction of the district school committee and the undersigned is duly authorized to submit this Statement of Interest to the Massachusetts School Building Authority. The undersigned also hereby acknowledges and agrees to provide the Massachusetts School Building Authority, upon request by the Authority, any additional information relating to this Statement of Interest that may be required by the Authority.

Chief Executive Officer ***School Committee Chair****Superintendent of Schools**

(signature)_____
(signature)_____
(signature)_____
Date_____
Date_____
Date

* Local Chief Executive Officer: In a city or town with a manager form of government, the manager of the municipality; in other cities, the mayor; and in other towns, the board of selectmen unless, in a city or town, some other municipal office is designated to the chief executive office under the provisions of a local charter. Please note, in districts where the Superintendent is also the Local Chief Executive Officer, it is required for the same person to sign the Statement of Interest Certifications twice. Please do not leave any signature lines blank.

Statement of Interest Narrative

School District: Arlington Public Schools

School Name: Ottoson Middle School

The Arlington Public Schools submits this Statement of Interest (SOI) to the Massachusetts School Building Authority (MSBA) to address urgent and comprehensive needs at Ottoson Middle School. Ottoson Middle School, built in 1921 and renovated in 1997, serves grades 7 and 8 in Arlington, MA. While the facility is in fair to good condition, numerous building systems and components are approaching or have exceeded their useful lives. A comprehensive 20-year capital plan estimates costs of \$16.2 million in inflated dollars (\$95.48 per gross square foot).

Current Challenges

The existing middle school building presents numerous challenges, including but not limited to:

1. **Aging Infrastructure:** Significant portions of the building's infrastructure—such as HVAC systems, roofing, and electrical systems—are outdated and in need of immediate repair or replacement to ensure safety and functionality.
2. **Environmental Sustainability Deficit:** The facility lacks modern energy-efficient systems, including renewable energy sources, and advanced climate control systems, making it costly to operate and environmentally unsustainable.
3. **Space Constraints and Inflexibility:** Classrooms and common spaces were not designed to support the diverse and evolving needs of 21st-century education, particularly experiential and project-based learning. The building's current layout limits opportunities for interdisciplinary collaboration, technology integration, and hands-on learning experiences.
4. **Accessibility and Equity:** The facility's design impedes the implementation of inclusive programming, particularly for students with diverse learning needs.
5. **Health and Safety Concerns:** The school faces persistent issues such as poor air quality, inadequate ventilation, and insufficient natural lighting, all of which negatively impact the well-being and performance of students and staff.

Classroom and Facility Deficiencies

Ottoson Middle School faces significant challenges related to the adequacy of its classroom spaces and facility design, which negatively impact student learning and overall school operations. World Language classrooms, originally small computer rooms, have been converted into instructional spaces that are not large enough to accommodate large classes. All World Language teachers must share classroom spaces as there are not enough spaces for teachers to have their own classroom, which impedes their ability to design individualized learning spaces for their content area. Additionally, the Grade 7 wing lacks dedicated science labs, which prevents students and teachers from fully engaging in hands-on, inquiry-based science

learning. This absence undermines the middle school's model of creating small learning communities within the larger school, as grade-specific science facilities are essential for supporting this structure.

Specialty classrooms, including those for music and the arts, are similarly undersized for the current student population. The music program has expanded significantly K-12 and the number of students who participate in the program at the middle school level continues to grow, yet the school has only one music room. Interior classrooms have been utilized and converted into band and orchestra rooms to meet the needs of the program, but do not enhance the teaching and learning of those spaces. Furthermore, the lack of a counseling suite has forced counseling offices to be scattered throughout the building, with some offices even located in converted closets, hindering privacy and collaboration among counseling staff.

The school also lacks an auditorium for hosting whole-school assemblies, performances, or programs. This absence limits opportunities for building a sense of community and conducting school-wide events. One of the gym spaces (blue gym) has an inadequate ceiling height, preventing students from engaging in wide range sports and physical activities. The ceiling height is dangerous and puts students at risk of injury. The ceiling lacks insulation and needs to be replaced in order to improve the heating and circulation of that space. The health classroom is currently housed in a converted space within the boys' locker room, a less-than-ideal arrangement for student learning and wellness instruction.

In addition to classroom and program space limitations, the building's layout creates logistical challenges. The drop-off and pickup structure is inefficient and contributes to significant congestion. Staff must drive through the same entry point where students are being dropped off or waiting to enter the school, creating safety concerns and delays. This traffic congestion is a major factor in the number of students arriving late to school, further impacting learning time. Addressing these facility deficiencies is critical to providing equitable and effective learning environments for all students.

The Ottoson Middle School also houses the Lexington, Arlington, Belmont, Burlington, Bedford (LABBB) Collaborative. The current structure of the spaces limits the full capabilities of the program. Currently, a book closet for the OMS English department serves as a breakout space for the LABBB program.

Commented [1]: I want to add more here after I tour some other LABBB middle school facilities.

Most Critical Capital Needs

Site Systems (\$899,219)

1. **Asphalt Pavement:** Extensive deterioration requiring resurfacing immediately, with future maintenance planned every five years.
2. **Concrete Walkways and Retaining Walls:** Cracking and spalls require localized repairs starting in Year 1 and recurring maintenance every 5-8 years.
3. **Stormwater Drainage:** Unresolved drainage issues need immediate professional assessment and corrective measures.

Mechanical Systems (\$1,009,085)

1. **Pneumatic Control System:** Inefficient and causing heating issues. Immediate replacement with a Direct Digital Control (DDC) system is necessary.
2. **Boilers:** Supplemental cast-iron boiler replacement required in Year 5. Primary boilers in good condition but will need replacement in Year 12.
3. **Ventilators and Exhaust Systems:** Classroom ventilators from the 1997 renovation are problematic and require immediate replacement.

Electrical and HVAC Systems (\$3,699,755)

1. **Packaged Rooftop Units:** Several units are near or beyond their service lives, with replacements planned in Years 1-20.
2. **Split-System Air Conditioners:** Overdue for replacement in computer rooms.
3. **Public Address System:** 50% non-functional; an immediate upgrade is necessary.

Architectural Systems (\$10,634,956)

1. **Roof Replacement:** The 1997 EPDM roof assemblies have active leaks, poor drainage, and water damage, requiring immediate full replacement.
2. **Brick and Stone Masonry:** Deterioration, mortar loss, and corroded steel lintels require urgent repairs, especially on the north-facing elevation.
3. **Exterior Caulking and Windows:** Failed caulking and aging windows need periodic repairs, with full window replacement scheduled for Year 16.
4. **Interior Renovations:** Repainting, ceiling tile replacement, and bathroom fixture upgrades needed to address wear and tear.

Vision for the Future

To address these challenges and align with our district's vision for college and career readiness, Arlington Public Schools seeks to partner with the MSBA to construct a new, state-of-the-art middle school that reflects the following priorities:

1. **Environmentally Sustainable Design:** The new building will embody cutting-edge sustainable practices, including net-zero energy systems.... These features will reduce the school's carbon footprint and serve as a teaching tool for students to explore environmental stewardship.
2. **Flexible Learning Spaces:** The design will prioritize adaptable spaces that support experiential and project-based learning. Features will include STEM/STEAM labs, makerspaces, collaborative hubs, and outdoor learning environments to foster creativity, critical thinking, and innovation.
3. **Enhanced Accessibility and Equity:** The new school will meet or exceed ADA compliance, ensuring equitable access to all facilities and programs. It will also provide specialized spaces to support diverse learning needs, including quiet zones, sensory rooms, and specialized instructional areas.

Commented [2]: I want to add more here and include a stronger narrative around course of study and classes offered. I'm wondering whether more than this is needed for the SOI or if this is enough of an overview for now.

Commented [3]: I also wonder if at this point we need to articulate whether this is a grade 7/8 school or whether it's a grades 6 - 8 school. I know that's a bit of question at this point too.

Commented [4]: can add more about what these might be...

4. **College and Career Readiness:** The facility will integrate technology-rich classrooms, career exploration spaces, and opportunities for real-world problem-solving to prepare students for success in a rapidly changing global economy.
5. **Community-Centered Design:** The new building will serve as a hub for the community, with spaces designed for after-school programs, public use, and partnerships with local organizations to enrich educational and extracurricular opportunities.

Alignment with District Goals

This project aligns with the district's commitment to fostering a strong sense of belonging, improving school culture, and promoting student engagement through innovative learning experiences. By addressing critical infrastructure needs, we will create an environment that supports academic excellence, social-emotional learning, and holistic development for all students.



Town of Arlington, Massachusetts

Adjournment (J. Thielman)



Town of Arlington, Massachusetts

Submitted by Jeff Thielman